

## Let's Make Cider!

It came a little late this year, but fall is finally here, although many of the trees in my yard have yet to begin their loss of chlorophyll to reveal brilliant reds, oranges and yellows. Likewise, the apple, grape and other harvests are delayed. One local winemaker told me doesn't expect to finish picking until December! (Eiswein?!). Like the change of color, cool crisp days and chilly nights perfect for sitting 'round a fire, fall also is a great time to consider making cider, or apple wine.

Interestingly, the historical record indicates the presence of apple trees in the Nile River Delta as early as 1300 BC, but unlike beer, there is little evidence to suggest that the ancient Egyptians ever produced cider. Not so with the Romans however, who discovered the Kentish villagers making and drinking an apple-based beverage. The Romans immediately took to the practice of making and consuming cider. From then on, the record is clear that cider was a popular beverage in Europe and was even referenced by Charlemagne. In England particularly, cider was popular and large planting of apples occurred specifically to create an ample supply of apples. Like beer, farm laborers often received an allowance of cider as part of their wages and Monasteries sold strong, spiced cider to the public. Like many industries and beverages (can you say Porter?), cider production went into decline only to enjoy a revitalization in the twentieth century. Most importantly however, is the desire in recent years to craft traditional ciders of yesteryear.

As in winemaking, the fruit is paramount. Not all apples are suitable for cider making, and not all fruit from a suitable variety will be of good quality. Making cider starting from apples requires a fairly extensive knowledge of apple varieties and really is beyond the scope of this article. However, there are a number of local cider makers (Baumgarner, 3-Rivers, etc.) and readers are encouraged to seek them out. The other aspect is that rarely is a cider made from a single variety of fruit, but instead a blend is sought (in contrast to wine where fermentation is usually single variety with blending to occur in the final stages, generally before bottling). Again, talking a cider maker is time well spent. Finally, an apple press is needed and most homebrewers or homebrew shops do not have this equipment. We will then assume that you have found a reputable source of pressed juice and are ready to begin a ferment.

Similar to winemaking, your must (unfermented juice) should be sanitized to minimize fermentation by wild yeast. This can be accomplished in two ways. The simplest and most common would be to add 50–100 parts per million (ppm) of sodium or potassium metabisulfite to the must before pitching your yeast. This is approximately one Campden tablet per gallon (3.8 L) of must. After you add the sulfite allow the must to sit for 24 hours before the yeast is pitched (or it may be inhibited by the Camden). Alternatively, the must may be pasteurized by heating it to 160 °F (71 °C) and holding it there for at least fifteen minutes. After cooling to below 80 °F (27 °C), you can add the yeast. Reportedly, there is no flavor difference between the two methods and some may prefer not to add sulfites to the cider.

Let's make some cider! As in beer, sanitize everything that will come into contact with the must. Add the must to the primary, splashing as much as possible to promote aeration. A traditional New England style cider would also have brown sugar and raisins; the latter adds tannins and some sugar and gives the finished cider some nice complexity. If you wish to do this, reserve a quart of the must, mix in the sugar and raisins and slowly heat to 160F. Hold for 15 minutes then add slowly to the primary.

Take a specific gravity of the must to determine style and alcohol (assuming that Final Gravity will be 1.000). For traditional cider, BJCP suggests a 4% ABV. New England Ciders can be much higher at 7-14% ABV. Fermentable sugars such as honey, molasses, maple sugar or brown sugar will produce more complex flavors and a higher alcohol level. As with beer, mead and wine, drinkability is key. Avoid hot, alcoholic or solventy results.

Yeast selection for ciders more approximates winemaking than brewing. In fact, the initial pH and sugar composition of cider must is closer to unfermented wine than wort. Many wine yeasts will be suitable for making ciders. Lalvin D47, common for Cabernet, is a good choice as is Champagne yeast, especially if you are looking to make a very dry cider. In liquid yeasts, a sweet mead yeast would be a possible choice as would White Labs WLP 775 (English Cider Yeast) which reportedly Ferments dry, but retains flavor from the apples. Wyeast offers 4766 which is stated to be a crisp and dry fermenting yeast with big, fruity finish, creating a nice balance for all types of apples, pears, and other fruit, and allowing fruit character to dominate the profile. Dry yeast can

be pitched at 11.5 gm per five gallons. Liquid yeast performs best at two vials/packs per five gallons.

As with mead making, the fermentation of ciders will probably benefit from an addition of DAP (diammonium phosphate) to provide proper nitrogen (FAN) levels. Ken Schramm's book on meadmaking is good reference on this topic. Also, pectic enzyme can be added (0.25 tsp per 5 gallons) to help with clarity in the finished cider.

Ferment the must at 65–70 °F (18–21 °C) for approximately 7 to 10 days, or until signs of fermentation activity slow, unless you're looking for a sweeter end product. Then rack the cider to a secondary for another couple of weeks. If you want a little sweeter product, you can halt fermentation with the addition of a Camden tablet. Towards the end of conditioning in the secondary, clarifying agents such as Bentonite, Poly-Clar or gelatine may be used to brighten the finished cider.

You're almost done! Taste your cider. If you would like it to be more tart (more acidity), you can add either malic acid (the same acid found in apples), or an acid blend commonly used by wine and meadmakers. Start small (0.5 oz.) and taste, adjusting to suit your palate. To sharpen your cider, you can add grape tannins, 0.5 tsp. at a time. Taste as in the acid additions. Other commercial additives include Wine Conditioner, which is highly concentrated sugar with sorbate which prevents fermentation. Use this to add sweetness. Mouthfeel can be improved with commercially available glycerine, usually at a rate of 2 oz. per 5 gallon.

Let your imagination run! Like spiced beers and other brews, ciders and spicing can work very well together. Cinnamon, ginger, cloves, allspice and others common to holiday cooking make great choices. Mix a tea of your spices in some rum and allow to sit for a week or two. Draw off the liquid and titrate to taste into your cider.

Like mead, ciders may be still or sparkling. You can bottle condition with the addition of corn sugar, or force carbonate as you do with beer. You can use standard bottles (crown caps and swing tops) or fancies that use a cork and cage.

## **Recipes:**

### Standard Dry Cider

5.1 Gallons pressed apple juice, or  
5.1 gallons pasteurized apple juice (without preservatives!).

Yeast of choice (English Cider, Lalvin D47, Champagne (will give you bone dry cider))

DAP or Super K Nutrient

Pectic enzyme (optional)

Pasteurize per discussion (either using Camden or heating to 160F for 15 minutes); not necessary if you buy pasteurized juice.

Check gravity with must at 60F (or use a refractometer) and adjust sugar content (adding sugar or water) to desired alcohol based on planned Final Gravity.

Pitch yeast and ferment, clarify, and condition per article.

New England Holiday Cider (Courtesy of Paul Zocco at [zoks.homebrewing@snet.net](mailto:zoks.homebrewing@snet.net) )

Follow recipe above with the following changes:

2 lbs Raisins

2 lbs Sugar (See article for suggestion)

Reserve about 1 pint of the juice and to a saucepan with the raisins and sugar. Heat to 160F and hold for 15 minutes. Add to mixture to primary and pitch yeast. Ferment two weeks (or until desired gravity and taste) and then transfer to secondary to condition for about another 2 weeks. Bottle and enjoy.