

CIDER

Cider, known as hard cider in North America, is an alcoholic beverage made from the fermented juice of apples. The juice of any variety of apple can be used to make cider, but cider apples are best. The addition of sugar or extra fruit before a second fermentation increases the alcoholic content of the resulting beverage.

Cider is popular in the United Kingdom, especially in the West Country, and widely available. The UK has the world's highest per capita consumption, as well as its largest cider-producing companies. Cider is also popular in other European countries including Ireland, Portugal (mainly in Minho and Madeira), France (in particular Brittany and Normandy), and Spain (especially Asturias and the Basque Country). Central Europe also has its own types of cider with Rhineland-Palatinate and Hesse producing a particularly tart version known as Apfelwein. Cider alcohol content varies from 1.2% ABV to 8.5% or more in traditional English ciders, and 3.5% to 12% in continental ciders. In UK law, it must contain at least 35% apple juice (fresh or from concentrate), although CAMRA says that "real cider" must be at least 90% fresh apple juice. In the US, there is a 50% minimum. In France, cider must be made solely from apples. In 2014, a study by The Daily Telegraph found that a pint of mass-market cider (Bulmers) contained five teaspoons (20.5 g) of sugar, nearly as much as the WHO recommends as an adult's daily allowance of added sugar, and 5–10 times the amount of sugar in lager or ale. Perry is a similar product made from fermented pear juice.

APPEARANCE AND TYPES

The flavour of cider varies. Ciders can be classified from dry to sweet. Their appearance ranges from cloudy with sediment to completely clear, and their colour ranges from almost clear to amber to brown. The variations in clarity and colour are mostly due to filtering between pressing and fermentation. Some apple varieties will produce a clear cider without any need for filtration. Both sparkling and still ciders are made; the sparkling variety is the more common.

Modern, mass-produced ciders closely resemble sparkling wine in appearance. More traditional brands tend to be darker and cloudier. They are often stronger than the mass-produced varieties and taste more strongly of apples. Almost colourless, white cider has the same apple juice content as conventional cider but is harder to create because the cider maker has to blend various apples to create a clearer liquid. White ciders tend to be sweeter and more refreshing. They are typically 7-8% abv in strength. Black cider, by contrast, is dry amber premium cider which has an abv of 7-8%. The descriptor black usually comes after the brand name such as Union Black and Barnstormer Black.



Figure 1 Glass of cider

PRODUCTION

SCRATting AND PRESSING

Apples grown for consumption are suitable for cider making, though some regional cider-makers prefer to use a mix of eating and cider apples (as in Kent, England), or exclusively cider apples (as in the West Country, England). There are many hundreds of varieties of

cultivars developed specifically for cider making. Once the apples are gathered from trees in orchards they are scrapped (ground down) into what is called pomace or pommage.



Figure 2 Cider press

Historically this was done using pressing stones with circular troughs, or by a cider mill. Cider mills were traditionally driven by the hand, water-mill, or horse-power. In modern times they are likely to be powered by electricity. The pulp is then transferred to the cider press and built up in layers known as cheeses into a block.

Traditionally the method for squeezing the juice from the apples involves placing sweet straw or hair cloths between the

layers of pomace. This will alternate with slatted ash-wood racks, until there is a pile of ten or twelve layers. The set is then subjected to increasing degrees of pressure, until all the 'must' or juice is squeezed from the pomace. This juice, after being strained in a coarse hair-sieve, is then put into either open vats or closed casks. The pressed pulp is given to farm animals as winter feed, composted, discarded or used to make liqueurs.

FERMENTATION

Fermentation is carried out at a temperature of 4–16 °C (40–60 °F). This is low for most kinds of fermentation, but is beneficial for cider as it leads to slower fermentation with less loss of delicate aromas. Fermentation can occur due to natural yeasts that are present in the must or some cider makers add yeast, such as *Saccharomyces bayanus*.

Shortly before the fermentation consumes all the sugar, the liquor is "racked" (siphoned) into new vats. This leaves dead yeast cells and other undesirable material at the bottom of the old vat. At this point it becomes important to exclude airborne acetic bacteria, so vats are filled completely to exclude air. The fermenting of the remaining available sugar generates a small amount of carbon dioxide that forms a protective layer, reducing air contact. This final fermentation creates a small amount of carbonation. Extra sugar may be added specifically for this purpose. Racking is sometimes repeated if the liquor remains too cloudy.

Apple-based juice may also be combined with fruit to make a fine cider; fruit purées or flavourings can be used, such as grape, cherry, raspberry and cranberry.

The cider is ready to drink after a three-month fermentation period, though more often it is matured in the vats for up to three years.

BLENDING AND BOTTLING

For larger-scale cider production, ciders from vats produced from different varieties of apple may be blended to accord with market taste. If the cider is to be bottled, usually some extra sugar is added for sparkle. Higher quality ciders can be made using the champagne method, but this is expensive in time and money and requires special corks, bottles, and other

equipment. Some home brewers use beer bottles, which work perfectly well, and are inexpensive. This allows the cider to become naturally carbonated.

(Source: Wikipedia)