
Cider/Perry Making on a small (Craft) scale

Recommended Food Safety/Standards Guide.

This guide has been created to assist small scale cider/perry producers, not just with maintaining standards but also as guidance for Environmental Health considerations.

The production of crafted or artisan¹ cider presents a number of problems in terms of complying with The Food Hygiene (England) Regulations 2006⁴.

- The initial stages of production are sometimes carried out in premises that are open sided and therefore open to the elements and accessible to pests.
- The raw material, usually apples, by the nature of the product and the method of harvesting is by its very nature likely to be contaminated with mud, insects and other contaminants.
- The crushing of apples to make the juice from which the cider is fermented can be a sticky process due to the high sugar content involved, and frequent rinsing of equipment is needed to avoid build-up of dirt-attracting residues.
- The production of cider is a traditional cottage industry and is often likely to be carried out on old equipment or equipment that does not fully comply with modern hygiene standards. Equipment is often constructed in wood which may be porous and more difficult to keep clean than synthetic surfaces, unless sealed e.g. with polyurethane.

On the other hand the final product is acidic and alcoholic, hence presents a low consumer risk microbiologically, and can be stored for long periods without any noticeable deterioration if sealed and if air is excluded. Fermented cider has a typical alcohol content of 6% at around pH 3.5 and does not support the survival of pathogens such as E coli and Salmonella³. Patulin is not present in fermented cider since it is destroyed by yeast action.

Physical contamination of the cider is minimised by the traditional method of storing the cider in large barrels that allow foreign objects to settle at the bottom without contaminating the product. Generally, barrels are closed to external contaminants through use of an airlock or bung. Chemical contamination is minimal as the fruit is generally collected from cider orchards (where spraying with chemicals is rarely undertaken) and the fruit is washed in water before use.

We hope that you will find this guide helpful.

The Law

You are required to ensure that the product is free from bacteriological, chemical or physical contamination and to produce the cider in premises that are clean, well maintained and free from pests. The person(s) producing the cider should be clean, free from infection, and be adequately trained to produce a safe product. If the cider is sold in bottles it must be labelled so as to ensure that the consumer is fully aware of what they are buying and of any additives that are used in the production process. Basic requirements of legislation are that food premises should:

- be clean and maintained in good repair;
- be designed and constructed to permit good hygiene practices;
- have an adequate supply of potable (drinking) water;
- have suitable controls in place to protect against pests;
- have adequate natural and/or artificial lighting;
- have sufficient natural and/or mechanical ventilation;
- provide clean lavatories which do not lead directly into food rooms;
- have adequate hand-washing facilities;
- be provided with adequate drainage.

Rooms where food is prepared, treated or processed should generally have surface finishes which are easy to clean and, where necessary, disinfect. This would, for instance, apply to wall, floor and equipment finishes. The rooms should also have:

- adequate facilities for washing food and equipment;
- adequate facilities for the storage and removal of food waste.

The 2006 guidelines are not prescriptive in this regard and require each business to consider and build a system and practice that is reasonable and appropriate for their business. For further information, refer to The Food Hygiene (England) Regulations 2006²

Premises.

Ideally the premises where the apples are sorted, washed and crushed to produce the juice should be enclosed and pest free. However, it is accepted that in the small-scale production of cider this is not always possible. Where the premises are exposed, additional vigilance must be taken to prevent pests contaminating the product. Some suggestions are:

- Store fruit off ground level and in a ventilated container
- Wash in a vessel that can be cleaned thoroughly
- Regularly clean the milling/crushing area and remove any debris

Ideally, fermentation vats should also be situated inside a pest free enclosure. If this is not possible the inside of the vat must be disinfected before use, lids always kept in place and the inside kept in a clean condition.

Pest Control.

Many small-scale cider makers operate from farm premises or from home locations. Pests, particularly rats, mice and birds can be a problem. If you do not have a regular pest control contract it is recommended that, before production is commenced, you thoroughly check the building and the surrounding land for pests. If evidence of pests is seen arrange for the area to be treated by a pest control company before production begins.

You can treat the infestation if you are skilled in such matters. Rodent poison can be purchased from a DIY shop or ironmongers store. It is of key importance to ensure that all of the rodents are treated and that the poison is not a risk to pests, other wild animals or children. Rodents which survive can become resistant to the poison.

Much small-scale cider production is carried out within the grounds of the cider makers home. This does not exonerate the producer from pest control and special attention should be given to ensuring that the different processes and materials (e.g. apples for pressing, used pomace, dirty equipment etc.) are dealt with through a thought out plan to avoid prolonged risk of contamination.

Walls, Floors and Ceilings.

In all cases walls floors and ceilings should be constructed in a hard non-porous material and either be lined or painted with a material which can be washed and, where necessary, disinfected. Where the premises are open sided efforts should be made to prevent birds and wild/domestic animals entering. Where it is impossible to prevent birds nesting in roof beams equipment such as barrels must be protected with polythene sheeting to avoid contamination.

Cleaning of Premises.

The premises where apple juice is extracted from fruit and where cider is fermented and stored is a food premises within the terms of the law. As such it is required that it is kept clean. Standards will not be expected to be maintained as high as in say a commercial kitchen but it will be expected that walls and floors will be regularly washed down and kept free of mud, pools of liquid, deposits of apple pulp, mould growth and animal deposits.

Cleaning of Equipment

Cider making equipment quickly becomes dirty and sticky and should be cleaned after each period of use. This document is not intended to specify how often it should be washed down but it must be kept clean. A good guide will be whether you would be proud to show your cider press and production area to your customers!

Fermentation tanks/barrels will require careful cleaning and sterilisation to prevent contamination of the product. Proprietary cleaning / sterilising agents sold for winery and brewery use are preferred.

It is recommended that plastic cider bottles are not returned by the customer for reuse unless disinfection can be guaranteed. A customer refilling his or her own bottles is acceptable.

Maintenance of Equipment.

Perhaps the greatest risk in the small-scale production of cider is from contamination by foreign objects, wood chips, pest droppings, contaminants etc. Good maintenance of equipment can minimise the risk, particularly where the product is in contact with wood. [Some wood becomes friable and splintered with age.] Usually, heavy items will sink to the bottom of the barrel and therefore will not present a risk. However, prevention is more reliable than hoping that contaminants will settle at the bottom of the barrel.

Apple Sorting

Usually “black” or unsound apples are removed at the sorting stage as they may cause a bitter taste in the cider. It is suggested that this stage provides an ideal opportunity to remove any rotted or contaminated apples and any foreign bodies. A good measure or quality test is whether you are personally reasonably happy to eat an apple – if not, it is better to reject it.

Apple Washing.

Apples should be washed in clean water prior to placing them in the press. The first apples placed within the tank will contaminate the water to a degree rendering cross contamination inevitable. Fortunately with a low risk product the risks are minimal. Sound apples float so that they naturally separate from soil and heavy debris during washing. However, it is important to change the water at regular intervals to prevent the water becoming sludge, or to double wash. Potable water must be used in all cases.

(Some washing tanks are set into the ground. This situation should be risk assessed to ensure that there are no health and safety risks.)

Personal Hygiene.

Hand washing facilities should be available within the premises. Hot and cold water or water at a suitably controlled temperature is ideal. Liquid anti-bacterial soap and disposable paper towels are recommended. For small producers operating from home premises, this is not intended to mean directly to the work area, but that there is water available for cleaning (which generally is true of a home. (Some producers use a hose dedicated to production to supply clean water and, as long as this is practical and can be demonstrated to be a clean solution, is sufficient).

Operators should wear clean washable overalls and clean waterproof boots.

Personnel should maintain a high standard of personal cleanliness and should not eat, drink or smoke except in designated areas. They should not wear any item of jewellery including watches

other than plain wedding bands or sleeper earrings. This aspect is no different from any other food preparation business.

Infections

Personnel must not work if they are ill or for 48 hours after they have suffered from diarrhoea or vomited. They must seek advice if they have suffered from any of the following:

- Viral hepatitis A
- Sore throat skin infections, sores. Infected lesions/wounds
- Discharge from ear, eye or nose.
- Food Poisoning
- Fever

Transport.

Small cider makers are unlikely to be using bulk transport. However, some do deliver cider to shops in plastic containers. Where such containers are transported in vehicles that may be used for other [farming] purposes it is recommended that the vehicle floor be lined with clean polythene sheeting.

If large vehicles require access to your business premises, you should demonstrate that this can be done safely and introduce precautions to safeguard any visitors.

HACCP.

A written HACCP (Hazard Analysis and Critical Control Points) document is necessary to demonstrate what controls are necessary to ensure a safe product. This could be extended to form a short documented system which could be entitled "Food Safety Procedures".

In the event of a complaint being made in respect of your product, your "due diligence"⁴ defence would be strengthened were you able to show that safety procedures had been adhered to.

A model HACCP shell for craft cidermaking which can be built on by individual businesses is attached.

Disclaimer

This information has been provided by the Cider Workshop in good faith and for the guidance of small cidermaking businesses, but no liability can be accepted for any use to which it is put.

References

1. Craft, Artisan or Real – these are all terms for the same product. In this document referred to as Craft Cider/Perry.
2. See – The Food Hygiene (England) Regulations 2006 – <http://www.food.gov.uk/multimedia/pdfs/fsaguidefoodhygleg.pdf>
<http://www.legislation.gov.uk/uksi/2006/14/contents/made>
3. Lea and Drilleau 'Cidermaking' in Fermented Beverage Production, Kluwer Academic, 2003 and references therein.
4. Food Safety [General Food Hygiene] Regulations 2006, Part 2 (11)