

SOME THOUGHTS ON CIDER SAFETY

Cider is a natural fruit juice made from apples. Making apple cider carries with it rich traditions from by-gone days of rural America. Here at Bishops' Orchard, we have tried to preserve those traditions. When you make cider at our orchard, you will be using much the same process as employed on farms throughout this country circa 1900. Prior to crushing, the juice in the apples is pure and free of harmful bacteria. Until recently, it was assumed that, once extracted from the apple, apple cider was too acidic for harmful bacteria. We now know that this is not true. Certain strains of harmful bacteria have been identified that can, in fact, survive in apple cider, as well as in all other natural fruit juices or acidic foods. We do not know if these bacteria are recent mutations, or if they have always been with us. *The very young and the elderly are especially vulnerable to these bacteria - for them, it can be life threatening.* The reality of bacterial contamination has turned the world of cider-making upside-down. However, careful attention to good, personal hygiene and good kitchen habits when processing and handling the cider will go a long way towards minimizing the chances of bacterial contamination.

When you make cider, you assume the responsibility to ensure that your cider is clean and wholesome. The greatest risk of bacterial contamination occurs when the apples are handled during crushing, pressing, and when the cider is bottled and stored. To reduce this risk, you should at a minimum:

1. **WASH YOUR HANDS BEFORE YOU BEGIN, AND THEN KEEP THEM CLEAN!**
2. Use only clean jugs or bottles. If you have any question whatsoever about your jugs, do not use them until they have been thoroughly cleaned.
3. Do not allow pitchers, funnels, pressing cloths, or baskets to touch the floor. Use the tables provided for each press.
4. All apples should be washed before they are ground. If you want to change the water in the washing tub before you begin, please let us know and we will change it. Too, we have chlorine (Clorox) available for your use should you wish to add it to the water; chlorine is a bactericide.
5. When you transfer the water from the washtub to the grinder, use the buckets with the perforated bottoms, and allow all water to drain from the apples before you dump them into the hopper. Please do not place these perforated buckets on the floor!
6. If you find an apple that is cut, squashed, punctured, or otherwise damaged, do not use it.
7. Keep feet, hands and fingers out of the catch basin.
8. When pouring the cider into your jugs, keep your fingers out of cider.
9. Please do not allow your children to stand on the pressing tray, or on any other part of the press or tables.

If you follow the above guidelines, you will minimize the risk of bacterial contamination while processing the cider. *However, no matter how careful you are in making the cider, bacterial contamination should still be considered a possibility, especially if the processed cider is not handled properly.* To avoid this possibility, **WE STRONGLY RECOMMEND THAT ALL CIDER BE HEATED (PASTEURIZED) BEFORE IT IS CONSUMED!** If done properly, heating will kill any stray bacteria that may have snuck into your cider. The cider should be heated to a minimum of 160 degrees F. To be effective, the cider must be heated uniformly. To ensure that this has occurred, we suggest maintaining it at 160 degrees for several minutes. Most harmful bacteria succumb to temperatures above 145 degrees F. Heating to 160 degrees or above should provide a reasonable margin for error. Caution: temperatures above 160 - 170 degrees will change the flavor of the cider, leaving it tasting flat (similar to store-bought apple juice). **YOU DO NOT NEED TO BOIL THE CIDER!** Cider boils at approximately 210 degrees. Boiling definitely leaves the cider tasting flat.

HOMEBREWERS TAKE NOTE: *if you intend to make hard cider (apple jack), heating will kill the natural yeasts that would otherwise induce fermentation. If you are making hard cider, there should be no need to heat the cider because the resulting alcohol should eliminate of any harmful bacteria.*

Once the cider has been heated to 160 - 170 degrees, you should immediately cool it and keep it refrigerated. A benefit of treating your cider is that it will then keep for an extended period if kept refrigerated. Of course, you should continue to exercise care when you handle the treated cider; keep in mind that it is food, and like any food, it must be handled properly to avoid post-treatment contamination.

The chances of contamination by harmful bacteria may be remote, and we certainly do not want to be overly alarmist. However, following the simple steps and recommendations outlined above should eliminate any potential problems from stray bacteria establishing itself during the process of making your cider. It is our sincere wish that you will enjoy making cider using the traditional methods employed by those who have gone before us, and that you will savor the cider you have produced just as they did in times past.