



# Fantastic Ferments

Charlie Zieke, Magic Acre Farm & Zieke Design ([charliezieke.com/fermentation](http://charliezieke.com/fermentation))

## What is Fermentation?

Fermentation is the oldest (and safest, when done correctly) form of food preservation.

Lacto-fermentation, powered by naturally occurring *Lactobacillus* bacteria, has been used for over 10,000 years in cultures around the world.



## Every Batch is Unique!

Temperature, local microbes, and even the hands that press vegetables under brine shape the final flavor. Every jar is a one-of-a-kind collaboration between you and the earth.

## Fermentation 101

*Lactobacillus* bacteria (found naturally on plants) eat sugars in food. Providing a salty, oxygen-free environment keeps harmful microbes out while encouraging the good ones that promote gut health.

This process produces lactic acid (which preserves the food and gives ferments some funk) and carbon dioxide (which adds some fizz).

## Fermentation Safety

It is important to create a salty, anerobic (no oxygen) environment. If food is exposed to air without enough salinity, bacteria can grow that can make us sick.

**As long as the vegetables stay under the brine, the food will not rot.** This is why fermentation is such a safe preservation tool, but there are simple rules to follow!

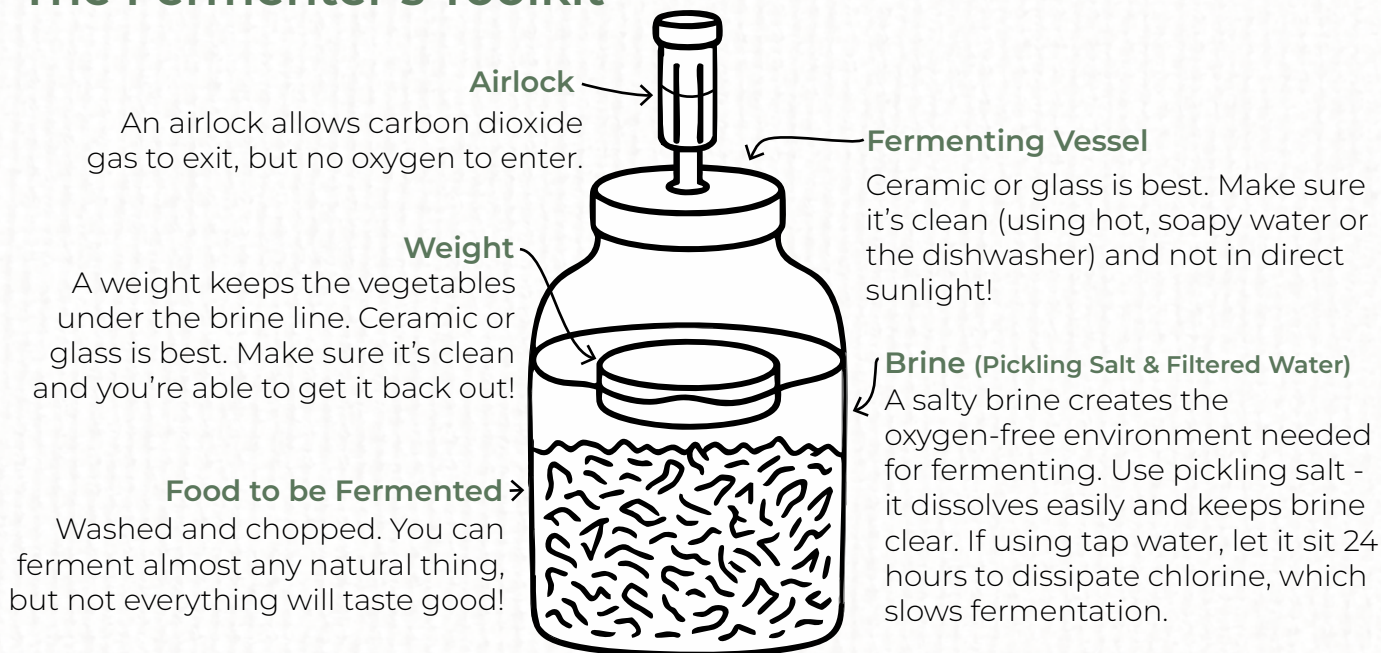


- + Start with clean tools and containers.
- + Keep vegetables submerged under the brine line at all times.
- + Watch for mold: surface yeast is harmless; fuzzy mold means don't eat it!
- + Store at safe temps (room temp to ferment, fridge to slow).
- + Trust your nose: sour and funky aroma = good, rotten smell = toss it.





## The Fermenter's Toolkit



## Sauerkraut Recipe



This is a simple cabbage slaw ferment that is great for beginners.

### Ingredients:

- + Green or red cabbage (1 small head will fill 1 quart mason jar)
- + Pickling salt
- + Fermentation weight

+ Clean fermenting vessel (mason jar or ceramic crock)

**Step 1:** Wash and shred your cabbage into bitesize (think coleslaw) pieces.

**Step 2:** Weigh shredded cabbage in grams. Multiply by 0.025 (2.5%) to find the amount of salt needed in grams.

**Step 3:** In a large bowl, pour salt over cabbage. mix well with your hands and allow to sit for 5-10 minutes.

**Step 4:** Massage salt into cabbage well. Cabbage will be giving up lots of moisture. Let sit for another 5-10 minutes.

**Step 5:** Pack cabbage into jar tightly, one layer at a time. Press down with your knuckles until the liquid covers the cabbage.

**Step 6:** Add glass or ceramic weight to keep cabbage below the brine level. Add airlock to top. Label the crock with the date.

**Step 7:** Ferment at room temperature for 4-14 days. Watch for bubbles - this indicates fermentation.

**Step 8:** Begin to taste at day 4 and continue tasting until you are satisfied with the flavor.

**Step 9:** Your sauerkraut will keep well in the fridge for at least a few months. Enjoy with everything!

## Salt Cheatsheet

Salt is key to safe, flavorful fermentation and controls speed, taste, and texture. We recommend using a 2.5% salinity to start, though temperature, humidity, veggie type, and microflora all play a role.

**More salt** → slower ferment, milder flavor, firmer texture

**Less salt** → faster ferment, tangier flavor, softer texture

**Warm temps** → faster fermentation

**Cool temps** → slower fermentation

