

### What is Fermentation?

Fermentation is a process whereby the natural bacteria present in fresh vegetables utilize the carbohydrates to reproduce and excrete lactic acid, which preserves the vegetables and creates a tangy flavor. Fermentation is carried out by Lactobacilli bacteria, a large family of acid producing bacteria that live in the soil, on all plants, and on the skin and in the digestive tracts of most animals.

### What Are the Benefits of Fermentation?

Fermentation is first and foremost a means of preservation; it is the original form of pickling! It creates healthy lactic acid that functions as a digestive aid - tangy pickles served at a meal help to whet the appetite and stimulate the production of digestive juices. It helps to keep our stomach and bowels at the proper pH. Lactic acid is also deadly to pathogens.

Fermented foods retain all their original vitamins, and the fermentation process also increases some vitamins, notably vitamin C. They contain active enzymes that can assist with digestion. Fermented foods have had the complex carbohydrates broken down and converted to organic acids, making them highly digestible. In a way, the foods are "predigested" by the bacteria, allowing us to absorb all the good nutrition. Raw fermented foods also contain live lactic acid bacteria which are considered to be probiotics, meaning they can help bolster our microbiome.

### How Does it all Work?

Fermentation was a happy accident! Thousands of years ago, workers building the Great Wall in China packed some cabbages with salt in a pot, hoping to preserve them. When they opened the pot later they found it bubbling and teeming with fermenting goodness, and a delicious sour flavor. That basic method of preserving vegetables in a salty brine spread around the world, so that nearly every culture with access to salt makes some kind of fermented food.

The two ingredients needed are: fresh vegetables and salt. Vegetables submerged in a salty brine soon begin bubbling with the fermenting activity of a variety of lactic acid bacteria which consume the sugars in the vegetables, excrete lactic acid, and also produce carbon dioxide.

## Two Fermenting Techniques To Brine, or Not to Brine?

**Dry Salting:** Dry salting refers to mixing finely sliced, chopped, or shredded vegetables with salt and letting them macerate to release their juices. Sauerkraut is the classic dry salted ferment. The shredded vegetables are mixed with salt, and then pounded and packed firmly in a jar. They release their juices, which submerges them and starts the healthy fermentation process. 1 tablespoon fine grind salt per 900g of vegetables, which will fit in a 1 quart mason jar works well.

**Brining:** Brining is used when you want to leave the vegetables whole, or in sticks or chunks. Dill pickles are the classic brined ferment. For brining, large pieces of vegetables are packed tightly in a jar, and then a salt water brine is added to cover them. Using about 450g vegetables per 1 quart jar, and about 2 cups of brine. Standard brine strength is 1 teaspoon salt per cup of water, which works well for most vegetables. Veggies that have a high water content, such as cucumbers or peppers, need a stronger brine - for these use 1.5 to 2 teaspoons salt per cup of water.

# Farming Secrets says: Ferments Are Easy To Prepare & Healthy For Your Gut