LACTO-FERMENTATION BASICS

We are surrounded by bacteria. Some, if treated right, will make our food more delicious and nutritious. Some will cause it to decay or even poison us. By creating a salty, oxygen-free environment, we eliminate harmful bacteria and moulds and allow lactic acid bacteria (LAB) to proliferate.

The LAB transform the sugar in fruit and vegetables into lactic acid which pickles and preserves the produce, making it further resistant to pathogens. In the process the food also becomes more nutritious and complex in flavour.

CLASSIC SAUERKRAUT

Makes roughly one 750ml jar

Ingredients

1 head of white cabbage
Salt
Caraway seeds (optional)

Steps

1. Vertically quarter the cabbage. Remove the cores and set them aside. Shred the cabbage.
2. Weigh your shredded cabbage. Calculate 2.5% of this weight and add that amount of salt. Toss well, adding 1tbsp caraway seeds if desired.
3. Leave for 30 mins or massage firmly for a little while until the cabbage has softened slightly and a small puddle of brine has collected in the bottom of the bowl.
4. Pack the cabbage tightly into a clean jar and pour in the brine. Use your cabbage cores as pickle weights so the when you shut the jar they push down on the shredded cabbage so it all remains under the brine.
5. Leave at room temperature for 1-3 weeks, opening the jar occasionally to allow gas to escape and to taste the cabbage. When it is as sour as you like it, move the jar to the fridge where it will keep indefinitely.

KRAUT VARIATIONS

You can use the shred, weigh, salt, pack method to create krauts with any hard vegetable you like. Experiment with different combinations and add herbs, spices, garlic and ginger for flavour. Always use between 2 and 3% salt and make sure everything is packed tightly and under the brine.

Here are a few of my favourites to give you a little inspiration:

- Red cabbage and beetroot with garlic, chilli, caraway and fennel seeds
- Carrot, fennel and celery with poppy seeds
- White cabbage with carrot, onions, jalapeno, oregano and lime (this is a central American recipe called Curtido)
- Thinly sliced courgette or squash (pattypan work well) with garlic and chilli
- White cabbage with ginger, turmeric, black pepper and pineapple
- White cabbage with caraway and dill

Let me know how your kraut gets on or feel free to get in touch with any questions, either by email on **clare@sycamoresmyth.com** or via Instagram where I am **@sycamoresmyth**

I also have a newsletter where I sent out a weekly ferment or ferment-adjacent recipe. You can subscribe at **clareheal.substack.com**

Sycamore Smyth

KIMCHI

Makes roughly one 750ml jar

Ingredients

1 head Chinese leaf/Napa cabbage
100g chunk mooli/daikon, in batons
1 large carrot
30g salt
10g glutinous rice flour (optional)
6 cloves garlic
thumb of ginger
4 spring onions
1tbsp sugar
3tbsp fish sauce (or soy sauce for veggies)
2tbsp gochugaru Korean chilli flakes (or to taste)

Steps

1) Quarter the cabbage and cut it into bite-size pieces (set the root aside). Put it in a large bowl. Cut the carrot and daikon into batons and add to the bowl. Toss the salt through the veg leave for 2-3 hours.

2) Meanwhile put the rice flour in a pan and add 80ml water. Cook, stirring gently until thickened into a paste. Let cool.

3) Crush or finely chop the ginger and garlic. Thinly slice the spring onions. Add to the rice flour paste along with the sugar, fish sauce and chilli flakes. If not using the rice flour paste, just mix the other ingredients and thin to a paste consistency with a little water.

4) Drain the veg in a colander and rinse under the tap until only faintly salty. Return to the bowl and mix through the paste.

5) Pack into a jar and seal. Leave at room temperature, occasionally opening the jar for the gas to escape (be careful – it gets fizzy!) and tasting a little bit. After 3 days move to the fridge.

WHAT DOES THE SCIENCE SAY?

In this workshop you joined us for an exciting journey into the world of gut health and the role of short-chain fatty acids (SCFAs). These SCFAs, like acetate, propionate, and butyrate, are the valuable by-products of the fermentation process that takes place in our colon, thanks to the microorganisms residing in our gut, known as the microbiome.

SCFAs are unsung heroes that support our digestive system, from nurturing the lining of our colon to maintaining the optimal pH balance, enhancing nutrient absorption, and fortifying our immune function. Diet plays a critical role in SCFA production. High-fibre diets rich in fruits, vegetables, legumes, and whole grains provide the necessary substrates for microbial fermentation, leading to increased SCFA production.

Fermented foods, such as sauerkraut, kimchi, kefir and kombucha, also contribute beneficial microbes that can enhance SCFA production in the gut. However, an imbalanced microbiome can disrupt the production of SCFAs, impacting our health. To restore balance, we turn to fermented foods, which introduce essential microbes and reignite the fermentation process.