1898 Yukon Goldrush Sourdough Starter Feeding – quick reference

All references in this guide refer to sourdough starter that is in a **semi-liquid state**; either cold from your fridge or room temperature on your counter.

Sourdough starter must first be fed, left in a warm place (room temp), and allowed enough time to become active *before* you can use it in your baking.

Ratio feeding 1:2:2 + a bit of white sugar

1 part **sourdough starter**
2 parts **water**
2 parts **all purpose wheat flour**
+ a bit of white **sugar**

By weight this ratio may look like:
100g sourdough starter, 200g water, 200g AP flour + 10g white sugar

By volume this ratio may look like:
1 cup sourdough starter, 2 cups water, 2 cups AP flour + 1 tablespoon white sugar

See page 3 for more information about how much starter you need to save. It will always depend on how much you use in your regular baking, and how little waste you want.

In order to activate a sourdough starter it needs food, temperature and time

The 1898 Yukon Goldrush Sourdough Starter loves a bit of simple sugar (white sugar). It has always been fed with a bit of white sugar or honey. You may choose not to give it any simple sugar; however, expect it to protest and not be as active as you expect.

I do not bake everyday; therefore, my starter lives in the fridge NOT on the counter. I must plan ahead before I can use my starter. I take it out of the fridge before bed, feed it, cover it and leave it on the counter in my warm kitchen to activate (not near a cold window). First thing in the morning it is ready to use.

It will have these visible signs that it is active:

- It is creating bubbles,
- It has at least doubled in size since it was fed

If your recently fed sourdough starter is not showing signs of life (no bubbles and has not doubled in sized) then it may be too cold or you may have to wait a few more hours. See section "Why is my sourdough starter not coming back to life?" for more information.

BEFORE YOU USE YOUR ACTIVE STARTER remove a small portion and return to storage.

- **Most importantly,** remove a small portion of your sourdough starter BEFORE you mix your dough, and place that small portion back into its storage container
- label the container with the date last fed, return it to the fridge with the container lid slightly opened so the gas produced by the starter does not blow the lid off or explode your glass storage container
- the starter will rise slightly as it cools because it takes a few days for the microbiome to slow down and become semi-dormant
- keep an eye on your starter over the next few weeks – **if you see a grey liquid starting to form on the top of the starter it is time to feed it,** even if you do not plan on using it.

Why is my sourdough starter not coming back to life?

First, you need to understand what a sourdough starter is. A sourdough starter is a microbiome of many different kinds of microbes (bacteria and yeasts) that naturally exist all around us. Some float around in the air we breathe, and some naturally exist on the plants we use to make our bread (ie: wheat flour). When those microbes are collected, fed, and nurtured they create a colony that works harmoniously (microbiome) to create CO_2 (carbon dioxide gas) and we use that microbiome to leaven (raise) and flavour our baked goods. Some bacteria in the microbiome create acid (lactic and acetic) which gives sourdough starter its unique flavour. Some bacteria are natural yeast which create the CO_2. All of the microbes in a sourdough starter feed on simple sugars (starch) as their fuel source (starch in flour, sugar, honey, etc). When the microbiome is in balance it "blooms". There is not reproduction (as we think of it in the animal kingdom) but rather like a network of aggressive chick-weed, ivy and mushrooms. Different organisms that thrive on the same food source and temperature will create a symbiotic relationship when the right conditions are met. If the food source, temperature and growing time are supplied in regular intervals, the garden grows strong, is in balance, and every organism thrives without having to compete. The cycle is never ending as long as the microbiome gets what it needs (food, temperature and time). A well-fed and well-cared-for sourdough starter is a balance of all these different microbes.

Commercial yeast is a single-cell yeast bacteria (microbe) that, when hydrated and fed starch, creates CO_2 very quickly. We use that gas to leaven (raise) our baked goods. A specific amount of commercial yeast is required to raise a specific amount of dough because commercial yeast is a finite organism (meaning it has a limited life span and does not reproduce or bloom). It is a bi-product from making other types of fermented foods (beer, gin, cider, wine, kimchi, pickles, etc.) and is relatively new technology (late 1700's) when compared to sourdough starter which is been cultivated since at least 8000BC or longer.

The only commonality between sourdough starter and commercial yeast is that they both contain yeast that create CO_2. That is it. Do not expect one to act like the other.

There are many reasons why a sourdough starter dies or becomes inactive. It can handle a bit of neglect (being left in the fridge for a few weeks between uses/feedings) but remember this is a living organism and needs food, temperature and time in order to thrive. Just like a human or pet. You may never know the exact reason why your sourdough starter is not behaving as it usually does, but here are some of the most common:

- You left it too long between feedings. If a grey or dark coloured liquid (called hootch) begins to form on the surface of your starter this is an indication of an imbalance of microbes and acids. Pour off the hootch, feed the starter and things usually work out fine. It may take a couple feedings to get the microbiome back into balance.
- The natural acid in the starter killed off too many microbes (natural yeasts) that make the bubbles (carbon dioxide). Feed it right away.
- Your water may be highly chlorinated and it killed the microbes (chlorine kills all microbes, both the good ones and the bad ones).
- You contaminated your starter last time you fed it. If a harmful microbe (bacteria) is introduced into sourdough starter it can overtake the microbiome and destroy the colony. Your hands, kitchen tools, storage container, flour, water or sugar may be the source of the contamination.

When in doubt feed your starter, warm it up and give it time
HOW MUCH STARTER SHOULD I SAVE?

That depends on how much starter you need for your baked goods.

If you find that every time you feed your starter you're left with too much waste aka discard (starter you don't use) then just reduce the amount of starter you begin with.

No matter how much starter you save, the feeding ratio will always be 1:2:2

Scenario #1:

You regularly make only one batch of sourdough bread and use a recipe that calls for 200g of starter. This means you need to save 50g of starter each time because:

- 50g sourdough starter +
- 100g water +
- 100g all purpose wheat flour +
- bit of sugar

will give you 250g of active sourdough starter. You will remove 50g of starter and return that to your storage container. You will have 200g of active starter for your recipe and there will be no waste.

Scenario #2:

You regularly make one batch of sourdough bread and a batch of cinnamon buns. Each recipe requires 200g of starter. This means you need to save 100g of starter each time because:

- 100g sourdough starter +
- 200g water +
- 200g all purpose wheat flour +
- bit of sugar

will give you 500g of active sourdough starter. You will remove 100g of starter and return that to your storage container. You will have 200g of active starter for your bread recipe, 200g for your cinnamon bun recipe and there will be no waste.

Scenario #3:

You are making your regular bread recipe that requires 200g of active sourdough starter but you also want to make a batch of cinnamon buns with a recipe that requires 150g of active sourdough starter. However, you only saved 50g of sourdough starter last time. Don't worry, just feed it the extra amount that you need* and know it may take a bit longer to become as active as it typically is with a 1:2:2 feeding (it's just because you have a bit more food to bacteria ratio than usual)

- 50g sourdough starter +
- 175g water +
- 175g all purpose wheat flour +
- Bit of sugar (about 1 tablespoon or 10g)

will give you 400g of active starter. You will remove 50g of active starter and return that to your storage container. You will have 200g of active starter for your bread recipe and 150g for your cinnamon bun recipe and there will be no waste.

*If you require a larger amount of starter, give yourself enough time to create 2 batches. See scenario #4 below.

Scenario #4:

You are making sourdough pancakes for a crowd. Your recipe requires 200g of active sourdough starter but you need at least 10x your recipe to feed everyone. It will take too long and too many stirrings to try inoculating 2000g of food with only 100g of starter. I would do the following:

- 100g sourdough starter +
- 200g water +
- 200g all purpose wheat flour +
- bit of sugar (1 or 2 teaspoons)

allow at least 8 hours to double in size. You will then have 500g of sourdough starter after this first feeding. Take that 500g of sourdough starter and repeat 1:2:2 feeding

- 500g sourdough starter +
- 1000g water +
- 1000g all purpose wheat flour +
- 40g or 4 tablespoons white sugar

and allow that batch another 8 hours to double in size. This double feeding will give you approximately 2540g of active sourdough starter. Remove your usual 50 - 100g of starter and return that to the storage container. You will have approximately 2000g active sourdough starter for your pancake batter. The +/- 50g that might be missing from the pancake batter will not make a difference in this large of a batch. I would shortchange the batter instead of short changing the amount of starter I save.

If you're worried about the added sugar, don't be.

Sourdough bacteria digest simple sugars – these are the naturally occurring starches in your flour plus the white sugar you add. This is also why I suggest you feed your starter with all-purpose wheat flour which has a higher starch content than wheat bread flour. The microbiome does not have to work as hard to break down the starch in all-purpose flour which means a cold starter from the fridge will be active and ready to bake with in 6-8 hours vs 12-14 hours it could take if you fed your starter with bread flour. In that initial rise after the first feeding, the microbiome has consumed most all the white sugar you added and a large amount of starch in the wheat flour. The white sugar is first to go because it's the easiest to digest. If there were any white sugar molecules left in the starter once it's activated, those would be so few in the actual loaf of bread dough because there is not much to begin with, and any bacteria in the bread looking for food will eat those sugar molecules first before going after the starch in the bread flour. It's called simple sugar for a reason.

Don't make sourdough any harder than it already is

Before humans could read and write they have been making sourdough bread. Type A, measure-everything-to-the-exact-gram bakers often struggle more with sourdough starter because they over-think it. The willy-nilly bakers who throw ingredients in a bowl and somehow still produce good sourdough find this journey less daunting. Find a balance between and you'll do just fine. Don't over think this ancient process. It can be overwhelming when you start your sourdough journey because of all the information out there. Once you go down the proverbial "rabbit hole" that is sourdough, you will learn many different techniques and practices that differ from the ones here. That is okay, there is no one "best" way to do this (or anything, really). Find the method that works for you and your starter.