

SOURDOUGH

FNH-00061

Sourdough, a yeasty starter for leavening hot cakes, waffles, muffins, bread, and even cake, is also a word for an Alaskan old-timer. For these early Alaskans, who lived alone or in small groups of three or four while mining, trapping or homesteading, sourdough became their 'staff of life.' Bread could not be made without it, so the starter became a precious possession.

Food supplies came once or twice a year by ship. The food supplies were off-loaded to small boats, river steamers, dogsleds or backpacks to reach remote coastal or interior Alaska destinations. Orders were placed a year in advance and foods were selected for keeping qualities as the arrival time often proved uncertain.

If yeast supplies ran out, replacements could be a long time in coming, especially if unseasonable ice formation and heavy wind or seas delayed the ships' entry into rivers or ports of call. Ordinary yeast plants, sensitive to the extreme cold, refused to grow well, while the combination of wild or adapted yeast in the sourdough starter proved as tough as its old-timer namesake. Or did the old-timer resemble and get his name from the indomitable sourdough starter? Choose whichever theory pleases you most.



ABBREVIATIONS

t = teaspoon
T = tablespoon
C = cup

pt = pint
qt = quart
gal = gallon

oz = ounce
lb = pound
F = Fahrenheit

SOURDOUGH STARTERS



A good starter contains only flour, water and yeast. It has a clean sour odor. The liquid will separate from the batter when it stands several days, but this does not matter.

Commercial sourdough starters now on the market are dried and powdered. Adding water brings it to life. In growing, the yeast gives off carbon dioxide gas which forms bubbles in sourdough or any other yeast dough.

If you don't have a starter

You can make your own starter and sponge with this recipe:

2 C	flour
2 C	warm water
1 pkg	dry yeast

Dissolve yeast in $\frac{1}{4}$ C warm water. Add the remaining water and flour and mix well. Place in a warm place or cupboard overnight. In the morning put $\frac{1}{2}$ C of the starter in a scalded pint jar, cover and store in the refrigerator or a cool place for future use. Leave lots of room for expansion in the container, or set the lid on without tightening it. This is sourdough starter. The remaining $3\frac{1}{2}$ C of starter can be used for making pancakes, waffles, muffins, bread, or cake **immediately**.

If you have a starter - set the sponge

In order to set the sponge place the $\frac{1}{2}$ C of starter in a medium size mixing bowl. Add 2 C warm water and 2 C flour. Beat well and set in a warm place, free from draft, to develop overnight. In the morning the sponge will have gained half again its bulk, will be covered with air bubbles and have a pleasant yeasty odor. The sponge can now be used in recipes for pancakes, muffins, bread, or cake.

Storing the starter

Starter will keep almost indefinitely in a clean, covered glass container in the refrigerator. Never use a metal container or leave a metal spoon in the starter or sponge. If unused for several weeks the starter may need to sit out an extra night before adding the flour and water.

Drying the starter

Sourdough starter may be dried for easy storing or sharing. To dry, drop by teaspoonful on wax paper. Turn frequently until completely dry. In Interior Alaska, drying takes about 24 hours. Store in a covered jar or airtight plastic bags.

To reconstitute dried starter

Crumble 2 or 3 circles of starter in $\frac{1}{2}$ C of warm water. Let stand overnight or until bubbly. Add $\frac{1}{2}$ C water and $\frac{1}{2}$ C flour. Stir. Let stand for a second night or until bubbly. Use to prepare the sponge as directed in recipes.

Old-timers added enough flour to their starter to shape it into a ball and then put it in a sack of flour for easy carrying.

Sharing your starter

To increase your supply of starter for sharing, set the sponge as directed above. In the morning, instead of preparing a sourdough recipe, remove your portion of starter as usual, then place $\frac{1}{2}$ C portions of the starter in clean glass or pottery containers for sharing.

Using soda in sourdough recipes

Soda is added to react with the acids resulting from the reaction of the yeast, thus forming more gas, which makes the batter lighter. If too much soda is added the product is brownish when baked. If too little soda is used, the product may be too sour in taste. Add the soda just before baking. In any sourdough recipe it

is most helpful to reserve one tablespoon of the liquid to dissolve the soda. Add this to the batter last, mix thoroughly, and bake. Never add soda to the starter. It will kill the yeast.

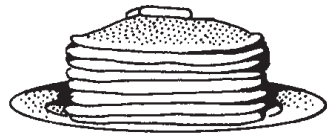
Sourdough Hotcakes

Sourdough hotcakes differ from other hot cakes in that a sponge is leavened with a yeast starter and soda. **The sponge must be set the night before it is to be used.**

If you prefer a thin pancake, add another egg or a bit more water; for a thicker cake, the sponge should have more flour. At the time of baking, the batter for sourdough should be the same consistency as the batter for other hot cakes that are family favorites.

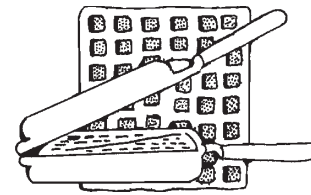
Set aside $\frac{1}{2}$ C sponge in the scalded refrigerator jar for your sourdough starter next time. To remaining sponge add:

- 1 or 2 eggs
- 1 T oil
- 1 t soda
- 1 T water
- 1 t salt
- 1 T sugar



Dissolve soda in water. Beat sponge. Add eggs, oil, salt and sugar to sponge and beat with a fork to blend in all ingredients. If you like, add several tablespoonsful of non-fat dry milk powder to any of the sourdough recipes at this point. Add soda-water mixture just before baking. Bake on a hot griddle. Turn once. Serve with a mixture of hot brown sugar syrup, or honey and melted butter. Molasses, jelly or rose hip syrup are other tasty combinations.

For interesting variations add $\frac{1}{2}$ C whole wheat flour, cornmeal, wheat germ or bran flakes to the batter. (Two eggs will provide the liquid for this addition.)



Sourdough Waffles

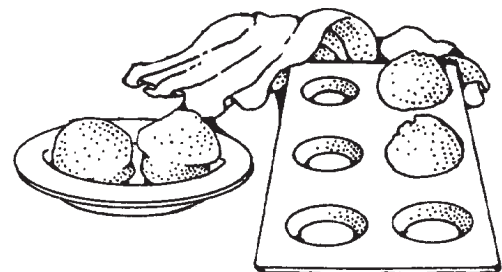
Use the basic hot cake recipe, but add two extra tablespoons of oil. Add the oil, then the soda-water mixture and bake at once, according to the directions that come with your waffle iron.

Sourdough Muffins

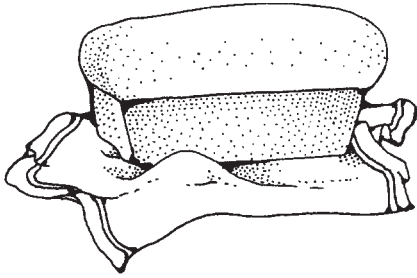
In the evening, or 6 or 8 hours before using, set the sponge. In the morning save $\frac{1}{2}$ C for the next starter, as usual, and to the remaining sponge add:

- 1 t salt
- $\frac{1}{4}$ C nonfat dry milk
- $\frac{1}{2}$ C melted fat
- 1 or 2 eggs
- 1 t soda
- 1 T water
- $\frac{1}{2}$ C whole wheat flour
- $\frac{1}{2}$ C sugar
- $\frac{3}{4}$ C raisins, blueberries, or cranberries

Sift dry ingredients into a bowl. Make a well in the center, set aside. Mix egg and fat thoroughly with the sponge. Add this to the well in the flour. Stir only enough to moisten the flour. Dissolve soda in water. Add the soda water and raisins or berries to the batter just before filling the muffin tins. The addition of $\frac{3}{4}$ C raisins, blueberries or cranberries results in a special treat. Fill greased muffin tins $\frac{3}{4}$ full. Bake in 375° F oven for 30 to 35 minutes. Yields 20 small or 12 large muffins.



SOURDOUGH BREAD



Sourdough White Bread

Set the sponge and let stand in a warm place overnight or for 6 or 8 hours. Save $\frac{1}{2}$ C sponge for next starter. To the remaining sponge, which should be about 2 C add:

4 C	flour (or more)
2 T	sugar
2 T	fat
1 t	salt
$\frac{1}{4}$ t	soda
1 T	warm water

Sift dry ingredients into a bowl (except soda), make a well in the center, set aside. Mix fat thoroughly with sponge. Add this to the well in the flour. Add enough flour to make a soft dough for kneading. Knead on a floured board for 10 to 15 minutes. Place in a greased bowl. Cover with a towel and let rise in a warm place for 2 to 4 hours or until doubled in size. Dissolve the soda in warm water and add to the dough. Knead it in thoroughly. Shape dough into loaves in bread pans and set aside to rise. When doubled, bake at 375° F for 50 to 60 minutes.



Casserole Bread

Use the same ingredients and methods as for Sourdough White Bread. Do not knead the dough, but beat it two minutes at medium speed setting of the mixer or 300 strokes by hand. Let stand in mixing bowl until double in bulk. Add $\frac{1}{4}$ t soda. Mix 30 seconds, turn into greased casserole or loaf pan and let stand 40 minutes. Bake as for Sourdough White Bread. Bread is done when crust sounds hollow when tapped.



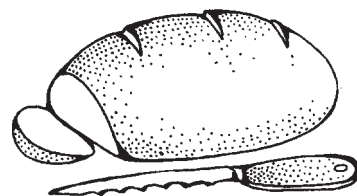
Sourdough Wheat Bread

2 C	sponge
1 C	whole wheat flour
1 C	white flour (or more)
2 T	sugar
$\frac{1}{2}$ t	salt

Combine ingredients and mix well with a fork. This sponge will be sticky. Set in a warm cupboard for two hours or more. Turn out on a warm, well-floured board. Knead one or more cups of white flour into the dough for 5 to 10 minutes. Shape into a round loaf and place in a well-greased pie pan. Grease sides and top of loaf, cover with a towel and let rise 1 hour or until doubled. Bake in a preheated oven at 450° F for 10 minutes, then reduce heat to 375° F and bake 30 to 40 minutes longer. Makes one large loaf. (If starter is very sour, add $\frac{1}{4}$ teaspoon **soda** to the flour that is on the board where the dough is kneaded.)

Sourdough French Bread

Prepare as for Sourdough Wheat Bread, but add 1 T yeast to the starter. Shape into two loaves by dividing the dough in half. Roll each half into a 15 inch x 12 inch rectangle. Wind up tightly toward you, beginning with the wide side. Seal edges by pinching together. Place rolls diagonally on greased baking sheets which have been lightly sprinkled with cornmeal. Let rise until doubled, about 1 hour. Brush with cold water. Cut with scissors or knife to make one or two lengthwise or several diagonal $\frac{1}{4}$ inch deep slits across tops of loaves. Place baking sheets in a hot (400° F) oven with a pan of boiling water placed on a rack below the bread. Bake 15 minutes. Remove from the oven and brush again with water. Reduce the temperature to 350° F and bake 35 to 40 minutes until golden brown. Brush a third time with cold water and bake 2 to 3 minutes longer. Makes 2 French loaves.



DESSERT

Sourdough Chocolate Cake

$\frac{1}{2}$ C thick starter
1 C water
1 $\frac{1}{2}$ C flour
 $\frac{1}{4}$ C nonfat dry milk

Mix and ferment 2 to 3 hours in a warm place until bubbly and there is a clean sour milk odor. Add:

1 C sugar	1 t cinnamon
$\frac{1}{2}$ C shortening	1 $\frac{1}{2}$ t soda
$\frac{1}{2}$ t salt	2 eggs
1 t vanilla	3 squares melted chocolate

Cream fat, sugar, flavorings, salt and soda. Add eggs one at a time, beating well after each addition. Combine creamed mixture and melted chocolate with sourdough mixture. Stir 300 strokes or mix at low speed until blended. Pour into two layer pans or one larger pan. Bake 350° F for 25 to 30 minutes. Cool and frost with Butterscotch-Chocolate frosting or other icing of your choice.

Butterscotch-Chocolate Frosting—In saucepan combine three 1-ounce squares of unsweetened chocolate, $\frac{1}{4}$ C butter or margarine, $\frac{1}{2}$ C light cream, $\frac{2}{3}$ C brown sugar (packed) and $\frac{1}{4}$ t salt. Bring to a boil, stirring constantly; cook until chocolate is melted. Remove from heat, add vanilla and enough confectioners sugar for good spreading consistency (about 3 C). Spread over sides and top of cake.

SOURDOUGH YARNS

Various stories tell of the sourdough starter's origin. The most credible are as follows:

'Sourdough Pete,' when a young man, came to Alaska from Michigan at the turn of the century to seek his fortune. His grandmother, who had pioneered in the Michigan woods, knew a thing or two about hardships in a new land. Her parting gift, a crock of yeast starter for hot cakes and bread, made him famous over the land. With the help of a sack of flour, 'Sourdough Pete' always had hotcakes to eat whether he struck it rich or not. He shared it with friends who, the story tells, walked miles to renew or get a starter of the yeast product. Pete became known for his generosity and his starter, hence his name 'Sourdough Pete'.

In 1900 an Alaskan prospector married an Indian girl. They started a sourdough pot and kept the starter going by using it regularly. When she died and the husband became ill, he refused to go to the hospital if he had to leave his sourdough pot. "It is all I have left of my wife," he said. It was given to a woman friend to guard. She kept her promise and used the starter once a week. From it, she gave starters

to countless other Alaskans. It is an especially good starter with a clean aroma and flavor.

Other stories of sourdoughs' survival in spite of hardships and rigors in the far northern interior explain that the pot of starter needed putting 'to bed' in the coldest weather. Under the covers, sharing its owner's body warmth, the starter survived to leaven the next day's supply of hot cakes. Between camps, it was the last item placed in the packsack and the first item to be removed upon arrival at the new site.

Another version of the care taken to keep the starter safe on journeys states that the owner wore it in a bag around his neck inside his shirt on long and cold journeys. An old sourdough warns; "If the starter turns orange, it is not spoiled; but if it turns green, it must be discarded." Modern Alaskans do not use discolored starters, but keep the starter clean and fresh in a refrigerator or other cool place and use it weekly.



TANNING HIDES

Sourdough has other uses too, as this bit of information from an old trapper explains:

To tan small hides such as mink, rabbit, ermine, or muskrat, first wash the hide with lukewarm soapy water, using a mild soap. Lay the skin on a flat board, hair side down. Cover it with a thick batter of sourdough. When dough begins to dry, start working the skin. Rub it with a circular motion against the palm of the left hand. Rub and knead the skin until it is dry and soft.

Sourdough was first printed in 1958 under the leadership of Lydia Fohn-Hansen.

For more information, contact Foods Specialist Kristy Long at 907-474-7974 or ffkal@uaf.edu.

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