

Growing Wild Yeast

"Yummy Bread"

(Original recipe by: N. J. Lang, Scientific American Explorations, Fall 2000, pg. 14-15.)

1 large glass bowl

1 2-qt. plastic, ceramic, glass container, or 1 gal plastic bag (this is what I use)

3 3/4 cups bread flour (commodity flour will work)

Supply List:

4 cups lukewarm water

10 grapes (organic is best, they lack pesticides) or you can use 10-20 raisins (commodity raisins will work)

cheesecloth (You can get by with out this if you do not mind fishing in the gooey mixture for the grapes.)

Remove stems from the grapes and wash them. Tie grapes in a double layer of cheesecloth. Set aside for later use. Fold water into flour in a large bowl or place flour and water into a gallon plastic freezer bag (as zip lock) using clean hands.

Day 1

If you used a glass bowl transfer to a 2-qt. container. Swish the bag through the mixture then place them on the bottom and cover container tightly (if you are using the gallon freezer bag you can mix the flour and water in the bag after you close the zip lock, then open it and add the grapes re-lock the zip lock and move the grape around in your flour and water mixture.)

Store at a temperature between 70 & 75 degrees F. The top of your refrigerator works well.

Make a chart to record your experiment observations on beginning with today's activities.

Day 2-3

Each day remove the lid and record your observations. The bag of grapes should have started to expand and rise to the top. Bubbles should begin to form in your flour & water mixture. Fermentation has begun. Also you should smell a yeasty or fruity odor. Fungi have begun to grow and reproduce. They are one of the decomposers in our soil. Remember to close your bag or replace your lid on your container.

Day 4

The yeast will separate, forming a yellowish liquid at the top of your container. This liquid maybe mottled with purple or brown. This is from a variety of beneficial bacteria--collected with the yeast--that will add a unique flavor to your bread. (Each student will have a different flavor to their bread depending on the microorganisms they captured.) Large bubbles and a strong alcohol-like odor will be present. You now need to feed your yeast. Add a cup of flour and a cup of water. The flour adds sugar to feed your yeast. Mix well. reclose your container. If nothing has happened with your experiment by this time start all over.

By this time the mixture should be very bubbly or foamy and have a strong yeasty fragrance.

Day 5-9 If it contains mold -- a green and fuzzy organism from the air--remove it. Mold will break down the yeast and weaken the mixture. After you remove the mold (if you have it) feed your yeast one cup flour and one cup lukewarm water.

Day 10 Take grapes (or raisins) out of your mixture. Remove two cups of mixture (now called starter). Divide your remaining mixture in two cup portions and share with family & friends or store in the refrigerator for later use. You will need to feed your mixture and your friend will also need to feed theirs share with them the directions below.

Place starter (2 cups) in a glass bowl. Add one cup flour and one cup lukewarm water. Mix together and cover loosely with a clean towel for about to eight hours. (Do not cover with an airtight lid; carbon dioxide will build and blow off your lid at this stage of your experiment. Repeat the above process, and allow the starter to ferment for 12 to 14 hours more. Add flour and water to your mixture in the above manner twice a day through the 14th day. Note all the changes on your chart.

Day 11-14 The starter dough should rise during these feedings. Enzymes from the yeast break down the sugars in the flour and release carbon dioxide gases that become trapped in the gluten in the flour. Carbon dioxide gas is what causes the gluten to stretch and the dough to rise. After baking the remnants of these gas bubbles are seen as air pockets in a slice of bread.

You now have a unique starter from the wild yeast harvested in your kitchen. If you are not planning to make bread, you can store your starter in a refrigerator. It will become dormant. When you're ready to bake, remove one cup and feed it for a few days, twice a day, as you did through steps in day 11 - 14.

Day 15 Begin making Friendship Bread (Yummy Bread).

Very often starter is referred to as Friendship Starter, or Friendship Bread, because you can share it with many people, (as your instructor and classmates). Bake the recipe below and note the Flavor on your chart.

Preheat your oven to 350 degrees F Grease three bread loaf pans (9" x 5" loaf pans).

IN A GLASS BOWL, MIX:

1 cup starter

1 cup vegetable oil (commodity will work)

1 cup sugar

4 eggs (dry eggs will work from commodities if you follow the recipes to reconstitute)

2 teaspoons vanilla

Sweet

Friendship IN ANOTHER LARGE GLASS BOWL, MIX:

Bread 2 teaspoons baking soda
 1 teaspoon baking powder
 2 cups flour
 2 teaspoons ground cinnamon
 1 cup chopped pecans (or any nut you have on hand)
 1 cup chopped apples
 1 cup raisins (commodity)

Blend all the ingredients together and mix well. Pour into pans and bake for about 50 minutes to an hour. Tooth pick will come out clean when you test your bread by inserting a tooth pick into the center of the loaf and pulling it out.

ENJOY!!!

