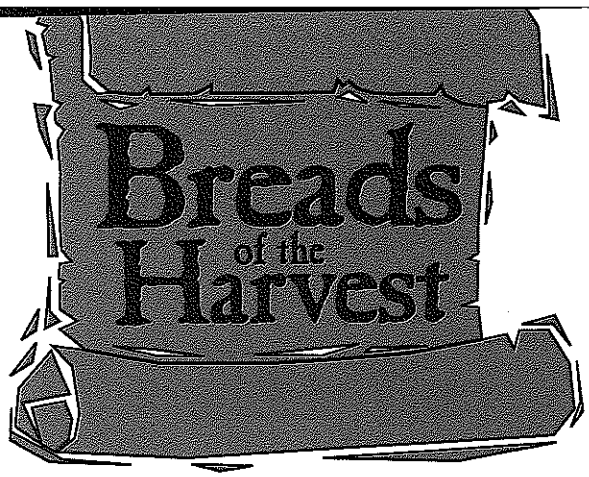


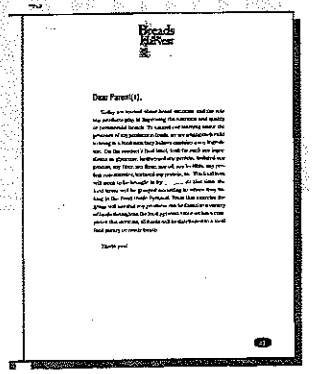
Go Beyond With a Thanksgiving Food Drive

Purpose: to see the vast number of food products containing soy ingredients

Have your group do a soy ingredient search with products brought from home. Allow each of them to bring in a food item containing one or more soy products such as glycerine, hydrolyzed soy protein, isolated soy protein, soy fiber, soy flour, soy oil, soy lecithin, soy protein concentrates, or textured soy protein. Have them group their items according to where they belong in the food pyramid. From this exercise the group will see that soy products can be found in a variety of foods throughout the food pyramid. When you are done, donate the foods to a local food pantry or needy family. Use the sample letter found in the Appendix to send home with your group.

Supplies

- Parent Letter



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Closing the Unit: Let's Make Bread!

To reflect on the business of colonial bakers and celebrate the innovation of George Washington Carver, have the group make a loaf of Carver's Colonial Bread. Follow the step-by-step instructions as you walk your group through this exercise. A single loaf variation of this recipe, along with instructions for making it at home, may be found in the back of this book. The single loaf version is accompanied by other quick bread and yeast bread recipes enriched with soy ingredients. Point out that the recipe group members will be using to make this bread was perfected in the College of Human Ecology test kitchen at The Ohio State University. It is similar to a recipe used by colonial era bakers and enjoyed by George Washington Carver. In fact, group members may wish to use their bread as a reason to sit down and enjoy a well-balanced meal with family or friends, just like the colonists.

Extend the learning by having the group complete the Name That Bread worksheet. This can be done while their bread is rising. It also helps the group think about ways in which they could market their bread.

1955: *First home bread recipes containing soy flour are produced. The recipes were based on Clive M. McCay's Cornell bread recipe.*

Recipe Carver's Colonial Bread

Makes enough dough for 24 students to take home 1 small loaf of bread. A single-use version of this recipe can be found in the appendix.

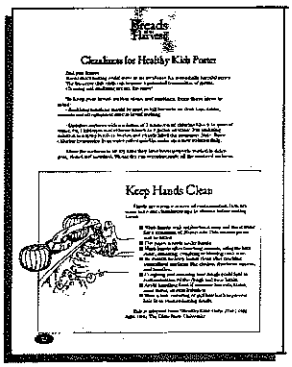
Ingredients:

15 lbs bread flour or all-purpose flour *(bread flour contains more of the necessary gluten to make the bread rise)*
12 packets of yeast
2 1/4 cups sugar
1/2 cup salt
2 1/2 cups soybean oil (or vegetable oil like Wesson)
3 cups soy flour

You also will need:

- 48 one gallon size Ziplock freezer bags (24 for mixing and 24 shipping home bread in pans)
- 24 2lb aluminum loaf pans
- 1 thermometer (disposable strip)
- dry measuring cups 1/4 , 1/2 , 1 cup
- 1 liquid measuring cup (with **BOLD** 1/2 and **1** cup markings)
- measuring spoons 1 tsp, 1 tbsp
- 14 craft sticks (tongue-depressor size, for scraping dough from bag and leveling flour)
- paper towels
- antibacterial hand soap for cleaning hands and work surfaces
- 4 pairs of craft scissors for cutting out nutrition facts labels
- 1 permanent marker for names on pans and marking bags 1 & 2
- roll of clear tape for attaching Nutrition Facts label to bags
- butcher block paper for covering work surfaces or cafeteria trays

Instructor Note: Before beginning, review the Cleanliness For Healthy Kids poster found on page 42. You may wish to review the poster with the group before beginning. Have group members wash hands with soap and water for 20 seconds and clean work surfaces as recommended in the fact sheet. Try covering work surfaces with a butcher block type paper for easy clean-up. Clean cafeteria trays also work well as work surfaces.



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Set up each of the following as work stations. See pages 37–41.

Station A: place in Ziplock freezer bag #1

1 packet of yeast
1 1/2 cups very warm water (110°F)
3 tablespoons sugar
2 tablespoons soy oil

Squeeze upper part of bag to force out air; close zipper on bag. Shake and work bag with fingers to blend ingredients.

Station B: place in Ziplock freezer bag #2

1 1/2 cups bread flour
2 teaspoons salt

Scoop flour with measuring cup and level off with craft stick. Add salt then squeeze upper part of bag to force out air; close zipper on bag. Shake and work bag with fingers to blend ingredients. When done, transfer the ingredients from bag #2 into bag #1.

Station C: place in Ziplock freezer bag #1

1/4 cup soy flour

Scoop flour with measuring cup and level off with craft stick.

Station D: place in Ziplock freezer bag #2

1 1/2 cups bread flour

Scoop flour with measuring cup and level off with craft stick. When your partner is ready, transfer the flour in Bag #2 to Bag #1. Work dough until thoroughly mixed.

Station E: place in Ziplock freezer bag #2

1 cup bread flour

Scoop flour with measuring cup and level off with craft stick. When your partner is ready, transfer the flour in Bag #2 to Bag #1. Work dough until thoroughly mixed.

Make a soft dough that begins to pull away from sides of bag. If too sticky, add an additional 1/4 cup of bread flour.

1960: *McDonald's creates the first bun for fast-food hamburgers. The buns were made from milk-enriched wheat flour containing lecithin, a fatty substance extracted from soybeans that improves both freshness and taste.*

Instructor Note: Once the station work has been completed, talk your group through the following steps.

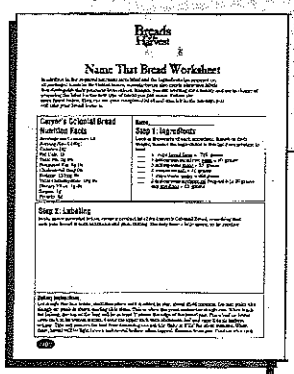
Nonstick cooking oil

Recipe

Nearly everything you bake on or bake in has to be greased. This means reaching for your favorite nonstick cooking spray like Pam. If you read the label, you will see it contains oil, lecithin (a soy oil derivative) and flavoring. To make your own, buy some granular lecithin at the supermarket or natural foods store. Mix $^1/_2$ cup lecithin and 1 cup liquid soybean oil, blending smooth in the blender. Keep refrigerated until needed. Moisten a paper towel with the mixture and apply a *very* thin coat to the entire baking surface.

Step 3 Supplies

- Name That Bread Worksheet
- Breads of the Harvest Recipes



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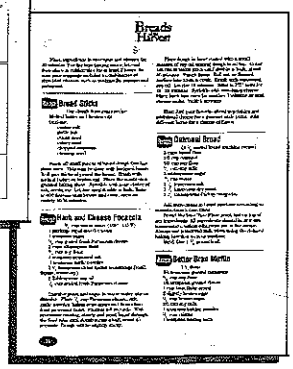


page 44–47

Step 1: Turn dough out of bag onto a lightly floured surface. This could be a clean cafeteria tray or surface covered with butcher block paper. Scrape dough from bag using a wooden craft stick. If sticky, add an additional tablespoon of flour and mix into dough. With a craft stick, **cut dough in half** so each partner has a lump to knead and shape into a loaf. Sprinkle some flour on each person's clean hands. Form dough into a ball and begin kneading. To knead, fold the dough toward you with your fingers. Give the dough a quarter turn, and repeat the fold and the push. Continue kneading dough until smooth and elastic, about 8 to 10 minutes. Let dough rest on floured surface for 5 minutes. During this 5 minute rest, coat pan with a nonstick cooking spray or moisten a paper towel with a mixture of oil and granular lecithin (see recipe at left) and **lightly** coat each baking pan Put name on each pan using a permanent marker.

Step 2: After the 10-minute rest, punch dough down. Work dough into a ball then roll into a 7" log. Place shaped dough in aluminum loaf pan. Place pan and dough into a clean Ziplock storage bag.

Step 3: Have group members attach their Nutrition Facts label to the bag containing pan and bread. This label is from the Name That Bread worksheet. This will let parents know the ingredients and nutritional makeup of the bread. Be sure to distribute the instructions for making this bread along with the recipes for making other nutritious breads.

(Optional) If you choose to bake the bread on the premises, let dough rise in warm, draft-free place until doubled in size, about 45-90 minutes. This means the top of the loaf will be at least 1" above the edge of the bread pan. Bake at 375°F for 35-40 minutes. When done, bread will be light brown and sound hollow when tapped. Remove from pans. Cool on wire rack. For a soft crust, lightly spray top of dough with a nonstick cooking spray.

Station A: place in Ziplock freezer bag #1

1 packet of yeast
1 $^{1}/_{2}$ cups very warm water (110°F)
3 tablespoons sugar
2 tablespoons soy oil

Squeeze upper part of bag to force out air; close zipper on bag. Shake and work bag with fingers to blend ingredients.

1985: *A revival of bread baking begins in America with the introduction of the bread machine, which removes the guesswork of kneading and rising times and eliminates the mess of mixing dough.*

Station B: place in Ziplock freezer bag #2

1 $^{1}/_{2}$ cups bread flour
2 teaspoons salt

Scoop flour with measuring cup and level off with craft stick. Add salt then squeeze upper part of bag to force out air; close zipper on bag. Shake and work bag with fingers to blend ingredients. When done, transfer the ingredients from bag #2 into bag #1.

1990: *American tastes for nutritional breads continue. Consumers began to look for high-nutrition, low-fat breads. The interest in the nutritive and conditioning value of soy flour continues to grow among home bakers.*

Station C: place in Ziplock freezer bag #1

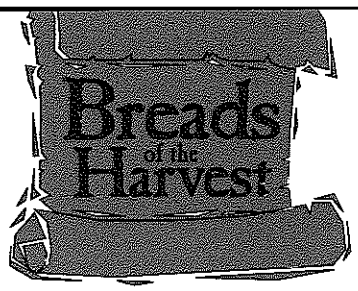
$^1/_4$ cup soy flour

Scoop flour with measuring cup and level off with craft stick.

Station D: place in Ziplock freezer bag #2

1 $^{1}/_{2}$ cups bread flour

Scoop flour with measuring cup and level off with craft stick. When your partner is ready, transfer the flour in Bag #2 to Bag #1. Work dough until thoroughly mixed.



Station E: place in Ziplock freezer bag #2

1 cup bread flour

Scoop flour with measuring cup and level off with craft stick. When your partner is ready, transfer the flour in Bag #2 to Bag #1. Work dough until thoroughly mixed.

Make a soft dough that begins to pull away from sides of bag. If too sticky; add an additional $^1/_4$ cup of bread flour.

Cleanliness for Healthy Kids Poster

Did You Know ...

- **Bread that's baking could serve as an incubator for potentially harmful germs.**
- **The innocent dish cloth can become a potential transmitter of germs.**
- **Cleaning and sanitizing are not the same!**

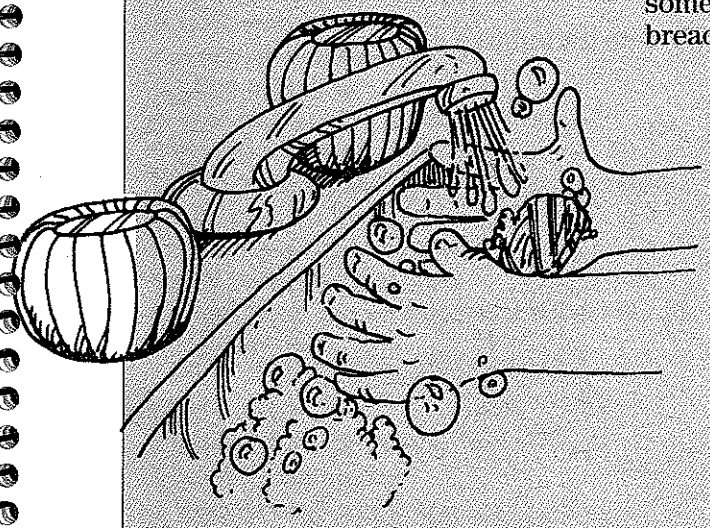
To keep your bread making clean and sanitary, keep these ideas in mind:

• Use a sanitizing solution to kill bacteria on desk tops, tables, utensils and all equipment used in bread making.

• Disinfect surfaces with a solution of 1 teaspoon of chlorine bleach to 1 quart of water or 1 tablespoon of chlorine bleach to 1 gallon of water. Put sanitizing solution in a spray bottle or bucket and clearly label the container. Note: Since chlorine evaporates from water rather quickly, make up a new solution daily.

• Allow surfaces to air dry after they have been properly washed with detergent, rinsed and sanitized. Wiping dry can recontaminate all the sanitized surfaces.

• Cloths used for wiping down equipment, utensils, or work surfaces should be wrung out frequently in sanitizing solution and stored in the solution when not in use.

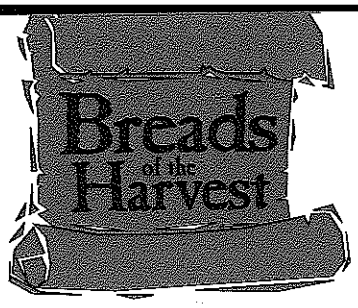


Keep Hands Clean

Hands are a major source of contamination. Here are some personal cleanliness tips to observe before making bread:

- Wash hands with antibacterial soap and warm water for a minimum of 20 seconds. This assures germs will be killed.
- Dry with single-use paper towels.
- Wash hands after touching animals, using the bathroom, sneezing, coughing, or blowing your nose.
- Be careful to keep hands clean after touching unsanitized surfaces like clothes, shoelaces, zippers, and handles.
- Avoid coughing and sneezing near dough. This could lead to contamination of the dough and your hands.
- Avoid handling food if you have cuts, burns, open sores, or skin irritation
- Wear a hair covering or pull hair back to prevent hair from contaminating dough.

This is adapted from *Healthy Kids: Germ Free*, copyright 1996, The Ohio State University.



Dear Parent(s),

Today we learned about bread nutrition and the role soy products play in improving the nutrition and quality of commercial breads. To extend our learning about the presence of soy products in foods, we are asking children to bring in a food item they believe contains soy ingredients. On the product's food label, look for such soy ingredients as glycerine, hydrolyzed soy protein, isolated soy protein, soy fiber, soy flour, soy oil, soy lecithin, soy protein concentrates, and textured soy protein. The food item will need to be brought in by _____. At that time, the food items will be grouped according to where they belong on the Food Guide Pyramid. From this exercise the group will see that soy products can be found in a variety of foods throughout the food pyramid. Once we have completed this exercise, all foods will be distributed to a local food pantry or needy family.

Thank you!

Take Home Recipes for Participants in the 4-H Breads of The Harvest Program

Today, your child made a loaf of bread. This activity is part of a program called "Breads of the Harvest" sponsored by the Ohio Soybean Council and Ohio State University Extension. This program was designed to teach your child about the science and nutrition of breads while learning about the Pilgrims and Colonial American settlers.

The accompanying recipes have been approved by The Ohio State University College of Human Ecology. When preparing these recipes with your child, be sure to review the principles of proper measuring, reading and following directions, and deciding when the batter is properly mixed and baked. Also remember to clean hands and work surfaces ***thoroughly***.

Recipe Carver's Colonial Bread

For two small loaves:

4 cups bread flour or all purpose flour *(bread flour contains more of the necessary wheat proteins called "gluten" to make the bread rise)*
1 packet of yeast
3 tablespoons sugar
2 teaspoons salt
1 $^1/_2$ cups warm water (110°F)
2 tablespoons soybean oil
(vegetable oil like Wesson)
$^1/_4$ cup soy flour*
1 one-gallon Ziplock freezer bags
Two 2lb aluminum loaf pans
thermometer for measuring temperature of water
set of measuring cups
set of measuring spoons
*bread flour can be used as a substitute for soy flour

Steps to Follow

Place in Ziplock freezer bag:
1 tablespoon yeast
1 $^1/_2$ cups very warm water (110°F)
3 tablespoons sugar

Squeeze upper part of bag to force out air; close zipper on bag. Shake and work bag with fingers to blend ingredients.Let stand for 10 minutes.

Add:
1 $^1/_2$ cups bread flour
2 teaspoons salt

Squeeze upper part of bag to force out air; close zipper on bag. Shake and work bag with fingers to blend ingredients.

Add:
2 tablespoons soybean oil
$^1/_4$ cup soy flour

Carefully squeeze upper part of bag to force out air; reseal bag. Mix by working bag with fingers until well blended.

Add:
1 $^1/_2$ cups bread flour

Carefully squeeze upper part of bag to force out air; reseal bag. Work dough until thoroughly mixed.

Add:
1 cup bread flour

Make a soft dough that begins to pull away from sides of bag. If sticky, add an additional $^1/_4$ cup of bread flour. Seal bag and mix into dough.

Next:

Remove dough from bag and place on a *clean* floured surface. Turn dough out of bag onto a lightly floured surface. Scrape remaining dough from bag. If sticky, add an additional tablespoon of flour and mix into dough. To knead, fold the dough toward you with your fingers. Give the dough a quarter turn, and repeat the fold and the push. Continue kneading dough until smooth and elastic; about 8 to 10 minutes. If dough becomes sticky, sprinkle dough with a little flour.

Let dough rest on floured surface 10 minutes. During 10-minute rest, lightly coat each baking pan with margarine or a non-stick cooking spray. After the 10-minute rest, punch dough down. Cut dough in half, work each half into a ball then roll into 7" logs. Place dough in separate 2lb aluminum loaf pans. Rub some softened margarine on top of each loaf.

Let dough rise in warm, draft-free place until doubled in size, about 90 minutes. This means the top of the loaf will be at least 1" above the edge of the bread pan. Bake at 375°F for 35-40 minutes. Place loves on lower oven rack at its lowest setting. Cover the upper rack with a piece of aluminum foil and raise it to its highest setting. This will protect the loaves from browning too quickly. When done, bread will be light brown and sound hollow when tapped. Remove from pans. Cool on wire rack.

Recipe Soft Pretzels

1 tablespoon dry yeast
1 1/2 cups warm water
1 tablespoon sugar
1 teaspoon salt
4 cups flour
1 tablespoon soy flour
1 egg, beaten
Salt to taste

Line baking sheets with baking parchment or nonrecycled brown paper; grease top only of brown paper (or use greased baking sheets). Dissolve yeast in warm water in bowl. Add sugar, 1 teaspoon salt and flour; mix well. Knead until smooth. Divide into 24 portions; roll into ropes (figure 1). Twist into pretzel shapes (figure 2); place on prepared baking sheets. Brush with egg; sprinkle with salt to taste. Bake at 425°F for 12 to 15 minutes or until light brown. Serve warm. Yield: Approx. 24 servings.

Thin-Style Pizza Parlor Crust

(hand tossed or bread machine)

Recipe

1 teaspoon dried yeast
1 tablespoon soy oil
1 teaspoon sugar
1/2 cup very warm water (110°F)
1 1/2 cup bread flour
1 tablespoon soy flour
1 teaspoon salt

Combine yeast, sugar and 1/2 cup very warm water in bowl let sit for five minutes. Combine flour and salt in bowl. Mix yeast mixture with bowl containing dry ingredients. Add a little extra flour if dough is sticky. Knead for a good 10 minutes. Put into a greased bowl and let rise for 60 minutes until it doubles in size. Turn out onto a floured surface then knead lightly until smooth. Roll out into a 1/4" thick 12" diameter circle. Fit into greased pizza pan. For pizza parlor-style crust be sure to use a thin metal pan with holes in the bottom. The holes allow heat to pass through the pan and brown crust. Top as desired and place on bottom rack. Put sheet of aluminum foil on top rack above pizza to keep ingredients from browning too quickly. Bake at 375°F for 30 minutes.

Pizza Parlor Sauce

(Will cover two 12" pizzas)

Recipe

1 15 ounce can tomato sauce
1 tablespoon soy oil
2 tablespoons water
1/4 teaspoon salt
1/2 teaspoon sugar
1/2 small chopped onion or 1/2 tablespoon dried onion flakes
1 teaspoon oregano
1/8 teaspoon garlic powder