

Mobile laboratory demonstrates solar energy

The feasibility of tapping the sun's energy to heat and cool Oregon homes and offices will be demonstrated in a mobile laboratory to be in Portland May 1st through May 9th.

The lab, sponsored by the U.S. Energy Research and Development Administration and Honeywell, Incorporated, will be parked near the Western Forestry Center at the Oregon Museum of Science and Industry Zoo Complex. It will be open for public inspection at no charge from 10:00 a.m. to 5:00 p.m.

Portland will be the 40th City that the Traveling Solar Laboratory has visited and is one of the last stops in the two-year nationwide scientific research project.

"The main objective of the traveling lab is to gather information that will help architects and engineers in utilizing the sun's energy for heating and cooling homes and buildings," said Reis Leming, customer and technical services manager for Pacific Power and Light Company. PP&L and OMSI are handling local arrangements for the lab's nine-day visit.

Since 1974, the two-unit lab has traveled most of the United States to help determine how efficiently the sun's energy can be used in place of coal, oil, electricity and natural gas in heating and cooling.

"Solar energy is an alternative energy source that is technically feasible now for heating homes and buildings," explained Leming. "But, until those who are responsible for implementing it into the housing and construction industry realize how it can be utilized, it won't happen as fast as it should."

Leming pointed out that solar collectors are becoming more readily available. "ERDA is now producing a solar products catalog that lists more than 130 manufacturers of solar collectors," he said.

The traveling lab has been collecting data from major climatic and geographic regions. The information will aid architects and engineers in designing future buildings to use solar energy.

The lab is equipped with a 625 square foot solar collector consisting of 64 panels each made of two sheets of steel. Water circulating between the steel sheets is warmed by the sun. Two 500 gallon storage tanks hold enough high temperature water to heat the laboratory for 24 hours in cold weather.

The 950 square foot lab is completely heated and cooled by solar energy when practical but is backed up by conventional systems for use during cloudy days.

Besides the trailer housing the equipment, weather station and control and data center, the lab has a van containing educational displays describing the principles of solar conversion.

The solar laboratory is equipped with a complete weather station so that solar energy collection systems efficiency and performance under prevailing weather conditions can be measured. At the end of each test day, data from the tape is transmitted directly to Honeywell's computer in Minneapolis.

The program highlights Black activities in Oregon from 1874 to the mid 50's, and includes information on Black settlers, cowboys, railroad workers, and shipyard workers. A large part of the information for the documentary came from the Oregon Historical Society and from older persons in the Black community. The focus is on events that helped shape the lives of Blacks living in Oregon, rather than on individuals. The documentary makes use of old motion picture film, photographs, dramatic reenactments and interviews to tell its story.

The program is narrated by Dr. William Harris, director of the Black Studies Department at Portland State University.

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TV documentary explores Oregon Black history

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Russian Black Bread symbol of hospitality

Russian Black Bread and salt are the edible symbols of Ukrainian hospitality. Host and hostess present the bread and salt to the guests. This means welcome with good will. Guests are expected to cut a slice of bread, dip it in the salt and eat it. This age-old custom often means that, even in a house too poor to offer more than bread and salt, the guest is welcome to share.

However poor the house, there is nothing poor about the splendid Black Russian Bread. It is often the favored accompaniment for caviar and fine cheeses. But it makes a delicious everyday bread for brown bag lunches too. In addition to wheat flour, this recipe calls for four cups of rye flour, and two cups whole bran cereal. Combine two tablespoons caraway seeds and you have a bread that's a candidate for a fair source of fiber.

Often called roughage, fiber is present in cereal grains as well as in vegetables and fruits. Its role in nutrition is in adding bulk to the diet which in turn decreases the transit time of food through the body. The most reliable sources of fiber are unrefined or lightly refined cereal grains, dried uncooked fruits and nuts. In addition to fiber, whole grains contain important amounts of thiamin, vitamin B6, vitamin E, iron and other nutrients including trace elements recently found essential. So in addition to being delicious to eat, Black Russian Bread is a fine source of important nutrients often missing from modern diets.

The recipe is prepared by the Rapid-mix method for making yeast bread developed by Fleischmann's Yeast. The dry ingredients are combined with a portion of the flour and the undissolved active dry yeast. The liquid ingredients are combined and heated to a very warm temperature (125° F.-130° F.) and gradually added to the dry ingredients. You can use an electric mixer for the first stage of heating. After all the flour is added, the dough rests for about fifteen minutes before kneading. The resting is important as it reduces stickiness which is characteristic of breads made with rye flour.

Note at the end of the recipe there are two special ingredients: a teaspoon of cornstarch and 1/2 cup water. These are cooked together while the bread is baking then brushed over the top of the loaves at the end of the baking time. This gives a dark, shiny glaze to the loaves and helps to keep them from drying out.

RUSSIAN BLACK BREAD

- 4 cups unsifted rye flour.
- 3 cups unsifted white flour.
- 1 teaspoon sugar.
- 2 teaspoons salt.
- 2 cups whole bran cereal.
- 2 tablespoons caraway seed, crushed.
- 2 teaspoons instant coffee.
- 2 teaspoons onion powder.
- 1/2 teaspoon fennel seed, crushed.



- 2 packages Fleischmann's Active Dry Yeast.
- 2 1/2 cups water.
- 1/4 cup vinegar.
- 1/4 cup dark molasses.
- 1 square (1-ounce) unsweetened chocolate.
- 1/4 cup (1/2 stick) Fleischmann's Margarine.
- 1 teaspoon cornstarch.
- 1/2 cup cold water.

Combine rye and white flours. In a large bowl thoroughly mix 2-1/2 cups flour mixture, sugar, salt, cereal, caraway seed, instant coffee, onion powder, fennel seed, and undissolved Fleischmann's Active Dry Yeast.

Combine 1-1/2 cups water, vinegar, molasses, chocolate, and Fleischmann's Margarine in a saucepan. Heat over low heat until liquids are very warm (120° F.-130° F.). Margarine and chocolate do not need to melt. Gradually add to dry ingredients and beat two minutes at medium speed of electric mixer, scraping bowl occasionally. Add 1/2 cup flour mixture. Beat at high speed two minutes, scraping bowl occasionally. Stir in

enough additional flour mixture to make a soft dough. Turn out onto lightly floured board. Cover; let rest fifteen minutes. Then knead until smooth and elastic, about ten to fifteen minutes (dough may be sticky). Place in greased bowl, turning to grease top. Cover; let rise in warm place, free from draft, until doubled in bulk, about one hour.

Punch dough down; turn out onto lightly floured board. Divide in half. Shape each half into a ball about five inches in diameter. Place each ball in the center of a greased eight-inch round cake pan. Cover; let rise in warm place, free from draft, until doubled in bulk, about one hour.

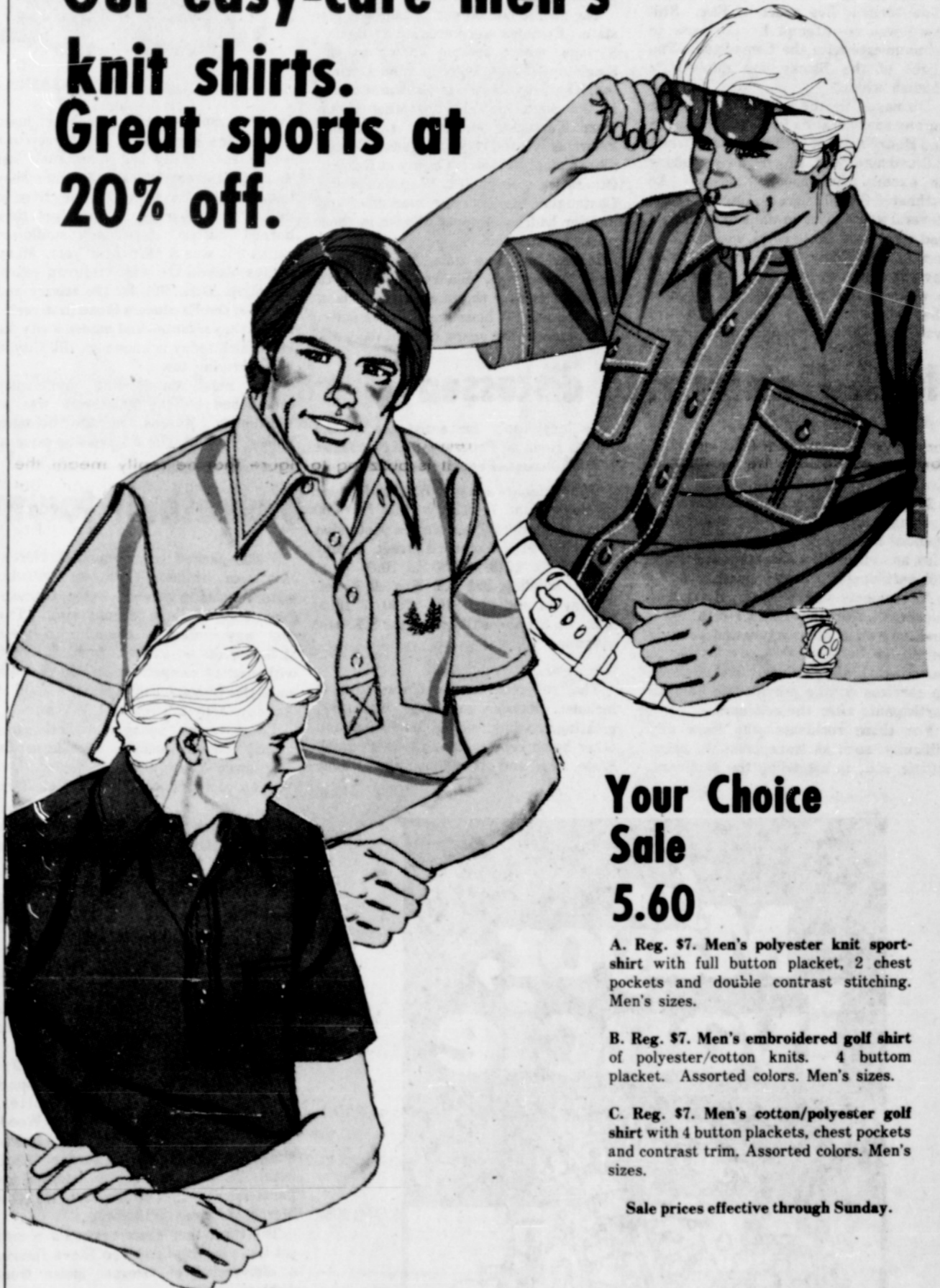
Bake at 350° F. 45 to 50 minutes, or until done. Meanwhile, combine cornstarch and cold water. Cook over medium heat, stirring constantly, until mixture starts to boil; continue to cook, stirring constantly, one minute.

As soon as bread is baked, brush cornstarch mixture over top of loaves. Return bread to oven and bake two to three minutes longer, or until glaze is set. Remove from pans and cool on wire racks. Makes two round loaves.

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