



Grains of truth about **WHEAT KERNELS**

Definition

Wheat, a member of the grass family (Gramineae), produces a dry one-seeded fruit, "caryopsis," commonly called a kernel, grain or berry. Wheat kernels or berries vary widely in hardness and color. The color of the bran is usually white or red and sometimes may be purple. Wheat kernels may be cooked and eaten whole and are the simplest form of wheat.



History

Neither the geographical, historical, nor the biological origin of wheat is known, although like all grains, it began as a wild grass. Existing evidence points to Mesopotamia as the original home, but the theory that the plant once grew wild in the Euphrates and Tigris river valleys has a wider acceptance than any other. Most ancient languages mention wheat and the fact that it has been found in the prehistoric habitations of man as early as 6700 B.C., notably in the earliest Swiss lake dwellings, is proof of its antiquity. Wheat was also cultivated in China in 3000 B.C. and was the chief crop in ancient Egypt and Palestine.

Availability

Whole-kernel wheat is available in its raw, dry form, or in a precooked, frozen "ready-to-eat" form. It may be found in the supermarkets, bulk bin commodity stores, health food stores, elevators, mills and through mail-order. In the store, it may be found in the produce section, the dry foods section or the specialty food aisle. The ready-to-eat form is available mainly to commercial institutions or on salad bars.

Storage

Because whole-wheat kernels contain the oil-rich germ, they will become rancid if stored too long at room temperature or warmer. To reduce rancidity and prevent insect problems, store the kernels in an airtight container in a cool (60°F or less), dry place.

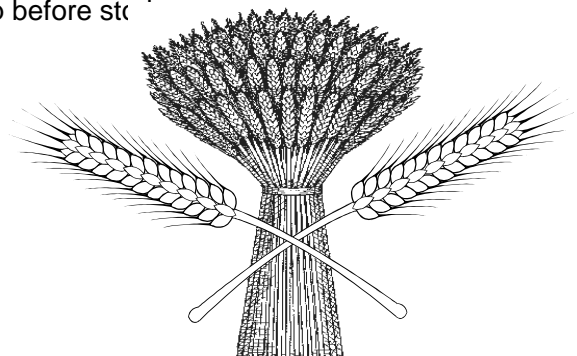
For best results, refrigerate for up to six months or freeze indefinitely. Before using refrigerated or frozen kernels in cooking, be sure to allow them to come to room temperature.

If storing large quantities of wheat for grinding, metal containers are the most effective. A clean garbage can with a secure lid will work. Store the garbage can on 2 x 4-inch slats so air can circulate around it, and it will last up to 2 years. Do not set the storage container directly on cement because this may cause the container to sweat. A metal container may absorb the moisture and rust, ruining the container.

Infestation

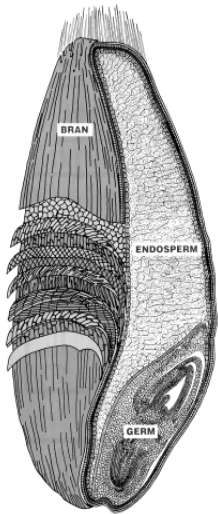
There are two ways to rid wheat of infestation: dry ice and freezing. Both are effective in killing any infestation inside and outside the kernel. The dry ice method uses a 3-ounce piece of dry ice in the bottom of the container. Pour the wheat on top of the dry ice and let the ice evaporate up through the wheat. This drives out the oxygen necessary for insects to survive. Allow sufficient time for the dry ice before sealing the container. Feel the bottom to see if it is still cool or has become warm. If it is warm, the dry ice has evaporated. Each 100 pounds of wheat will require 8 ounces of dry ice. The use of dry ice could hinder the sprouting process.

The next best alternative is freezing. If the kernels are frozen thoroughly, infestation will be eliminated. To achieve a sanitary point, freezing should be done in small amounts. The suggested amount is one gallon of wheat kernels frozen for five to six days. This guarantees the penetration of cold air throughout the kernel. Be sure to check for moisture buildup before st



Nutritional value

One serving of fully cooked wheat kernels equals ½ cup, about 2.5 ounces (or 1 ounce dry), and provides:



Calories	42
Carbohydrates	10 g
Cholesterol	0 mg
Dietary Fiber	2 g
Fat (Total)	0 g
Potassium	50 mg
Protein	2 g
Sodium	0 mg
Selenium	8 mcg
Iron	0 mg
Niacin	1 mg
Thiamin	0 mg
Riboflavin	0 mg
Folate	6 mcg
Carbohydrates	81%
Fat	4%
Protein	15%

Calories from:

Preparation

- ◆ Use only untreated wheat from the combine or commercially sold wheat berries.
- ◆ Rinse whole-wheat kernels before cooking, but do not wash before grinding or milling.
- ◆ Presoaking wheat kernels overnight in the water it is to be cook in will cut cooking time in half. Proportions should be 3 cups hot water to every 1 cup of kernels. Salt may be used if desired, ¼ to ½ teaspoon salt per each cup of wheat.
- ◆ Cook kernels 20 minutes if presoaked; 45 minutes if not. One cup of wheat kernels equals 2 ½ cups cooked, plump kernels.
- ◆ A slow cooker or crock-pot will work well to cook whole-wheat kernels. Just set on low and cook overnight (about 8 hours), stirring once during the first hour of cooking. Use 2 cups of wheat per 4 cups of water.
- ◆ To cook whole-wheat kernels in the oven, preheat oven to 300°F. Boil 1 cup of wheat and 2 cups of water in a heavy saucepan for 5 minutes. Remove from heat, cover and place in the oven. Turn oven off and leave undisturbed for about 6 hours. It will yield about 3 cups cooked whole-wheat kernels.

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◆ To microwave wheat kernels, combine, cover and cook ½ cup wheat and 1 cup cold water 3 to 4 minutes on high, or until tender. Cover with waxed paper during cooking. Simmer 4 to 6 minutes longer, add 1 to 1 ½ cups of water and cook longer if needed for more tenderness.

◆ Par-cooked or presoaked wheat kernels may be refrigerated for three to four days. Fully cooked wheat can be refrigerated for one week. Both may be frozen for up to six months.

◆ Cook a large amount of wheat and freeze the kernels in small portions to save time and energy. After cooking, just drain the cooked kernels well and place ½- to 1-cup portions in freezer containers. Thaw kernels by running hot tap water over them in a colander.

Recipe

SALEETAH

1 cup water

2 cups precooked wheat kernels

¼ teaspoon ground cinnamon

1-tablespoon whole anise seed

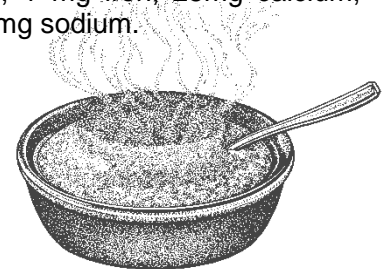
2 tablespoons sugar

½ cup raisins (golden or dark)

½ cup chopped pecans

Combine water, wheat and spices in a pan. Simmer 5 to 10 minutes; remove from heat. Add sugar, raisins and pecans. Chill or serve warm. Makes six servings.

Nutrient Analysis: Each serving provides approximately: 153 calories, 3 g protein, 22 g carbohydrates, 3 g fiber, 8 g fat (1 g saturated), 0 mg cholesterol, 7 mcg folate, 1 mg iron, 25mg calcium, 180 mg potassium and 3 mg sodium.



Wheat Foods

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