

What's the Difference???

Whole Grains vs. Enriched Grains / Flour 101

The Wheat Kernel consists of three components:

- **BRAN** -The bran (outer layer) contains the largest amount of fiber.
- **ENDOSPERM** - The endosperm (middle layer) contains mostly protein and carbohydrates along with small amounts of B vitamins.
- **GERM** - The germ (inner part) is a rich source of trace minerals, unsaturated fats, B vitamins, antioxidants and phytonutrients.

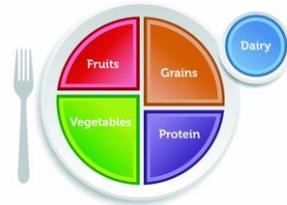
Whole Grain

Whole grain flour is made with the whole kernel of grain (Bran, Endosperm, and Germ). Whole grains are a rich source of a wide range of phytonutrients with anti-carcinogenic properties. Many of the phytonutrients concentrated in grains have shown promising results against cancer, heart disease, and diabetes.

Enriched Grain

Enriched white flour is the finely ground endosperm of the kernel. The assumption that everything good has been “stripped” away is a fallacy. Many of the nutrients that have been milled out are replaced through enrichment or fortification. Enriched White flour is a great source of Iron, B Vitamins, Folic Acid and Complex Carbs.

*According to the US Dietary Guidelines the recommended daily intake of grains for adults is about 6 ounces, 3 of which should be whole grains. Since wheat is a grain we encourage you to eat wheat every day! After all, the last three letters in wheat is **EAT!***



Did you know Flour is made by grinding up Wheat Kernels?

There are many different types of flour too! Soft, low protein wheats are used for cakes, pastries, cookies, and crackers, while hard, high protein wheats make excellent breads.

Whole wheat flour This flour is milled from the entire kernel of hard red wheat either by grinding the whole-wheat kernel or recombining the white flour, germ and bran that have been separated during milling. The presence of bran reduces gluten development, therefore, items baked with whole wheat flour tend to be heavier and more dense than those made from white flour. The insoluble fiber content is higher than in white flours.

White flour

The finely ground endosperm of the wheat kernel.

Self-rising flour Self-rising flour is a convenience product made by adding salt and leavening to all-purpose flour. It is commonly used in biscuits and quick breads, but is not recommended for yeast breads. One cup of self-rising flour contains 1½ teaspoons baking powder and ½ teaspoon salt. Self-rising can be substituted for all-purpose flour by reducing salt and baking powder according to these proportions.

All-purpose flour White flour milled from hard wheats or a blend of hard and soft wheats. It gives the best results for a variety of products, including some yeast breads, quick breads, cakes, cookies, and pastries.. All-purpose flour is usually enriched and different brands will vary in performance. Protein content varies from 8-11 percent.

White whole wheat flour This flour is milled exactly like whole wheat flour and is nutritionally equivalent to whole wheat flour as well. The only difference is that whole white wheat flour is made with a white, not red wheat variety. The bran of white wheat is lighter in color and has a milder flavor than red wheat and therefore the flour has these properties as well.

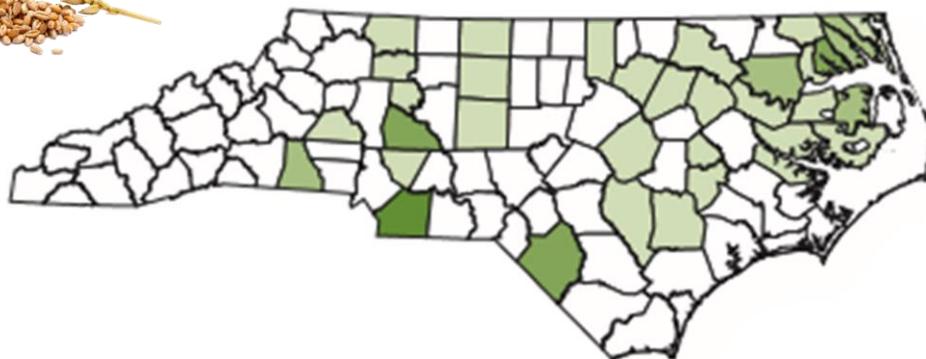
Gluten flour Usually milled from spring wheat and has a high protein (40-45 percent), low-starch content. It is mixed with other non-wheat or low-protein wheat flours to produce a stronger dough structure. Gluten flour improves baking quality and produces a high-protein bread.

Cake flour Fine-textured, silky flour milled from soft wheats with low protein content. It is used to make cakes, cookies, crackers, quick breads and some types of pastry. Cake flour has a greater percentage of starch and less protein, which keeps cakes and pastries tender and delicate. Protein varies from 7-9 percent.

Pastry flour Has properties intermediate between those of all-purpose and cake flours. It is usually milled from soft wheat for pastry-making, but can be used for cookies, cakes, crackers and similar products. It differs from hard wheat flour in that it has a finer texture and lighter consistency. Protein varies from 8-9 percent.

Bread flour White flour that is a blend of hard, high protein wheats and has greater gluten strength and protein content than all- purpose flour. Bread flour is milled primarily for commercial bakers, but is available at most grocery stores. Protein varies from 12-14 percent.

North Carolina Wheat Facts



Bushels

	Under 100,000
	100,000 to 249,999
	250,000 to 499,999
	500,000 to 999,999

- There are 6 classes of wheat grown in the United States. North Carolina wheat farmers primarily grow Soft Red Winter Wheat which is planted in the fall, grows in the winter and is harvested in late spring.
- There are many different wheat seed varieties the farmer can plant. In choosing the right variety farmers must consider: weather tolerance, variety adaptability, test weight, protein level, high yield, and resistance to diseases, pesticides, & weeds.
- 80% of NC wheat grown is used for livestock feed, 20% is used for human consumption to make flour.
- On average, North Carolina grows 500,000 acres (+ or -) of wheat every year throughout the state.
- The average farm size in North Carolina is 250 acres. The average yield per acre is 69.5 bushels. A bushel is 60 lbs. of wheat seed (seed = grain, berries, kernel)
- 1 bushel of wheat can make 45 loaves of bread. The farmer receives approximately \$5.00 per bushel, while the grocery store receives \$140 for 45 loaves of bread. THANK A FARMER.
- There are no commercially-available wheat varieties in the world today that have been Genetically Modified.
- Gluten is a protein found in wheat, rye, and barley. Gluten provides structure for baked products requiring volume such as bread. There is no caloric or nutritional advantage to eating Gluten-free foods.



ncwheat.com

About Us: The North Carolina Small Grain Growers Association is a nonprofit organization established to encourage, promote, and develop more efficient small grain marketing and production practices. Our goal is to participate in all matters relative to the interest of small grain producers in North Carolina. We promote applied research in production, efficient management practices, and variety development. We also promote educational programs for the progress of small grains in North Carolina and work with individuals, organizations, and governmental agencies toward the achievement of increased profits from small grain production in North Carolina. We are funded through a farmer approved assessment program receiving \$.005 of total money collected on Wheat, Oats, Rye, Barley, Canola, Rapeseed, and Grain Sorghum in the state.

Ingredients

- 3/4 cup granulated sugar
- 3/4 cup packed brown sugar
- 1 cup butter or margarine, softened
- 1 teaspoon vanilla
- 1 egg
- 2 cups whole wheat flour
- 1 teaspoon baking soda
- 1/2 teaspoon salt
- 2 cups (12oz. pkg.) semisweet chocolate chips

Whole Wheat Chocolate Chip Cookies!



Instructions

Heat oven to 375°F. Mix sugars, butter, vanilla and egg in large bowl. Stir in flour, baking soda and salt. Stir in chocolate chips. Drop dough by rounded tablespoons about 2 inches apart onto ungreased cookie sheet. Bake 8 to 10 minutes or until light brown (centers will be soft). Cool slightly; remove from cookie sheet. Cool on wire rack.