Milling

Ground grain was one of civilized man’s first foods. Ancient methods of grinding can be traced to the Far East, Egypt and Rome. As early as 6,700 B.C., man ground grains with rocks and milling began.

The modern milling process transforms wheat kernels into wheat flour, which is used to make everything from cereal and crackers to bread, tortillas and pasta. Wheat is the primary grain used in U.S. grain products—approximately three-quarters of all U.S. grain products are made from wheat flour. Each American consumes approximately 138 pounds of wheat flour annually.

From Wheat to Flour

Flour is the product obtained by grinding wheat kernels or “berries.” During milling, the wheat is analyzed, blended, ground, sifted and blended again. The three parts of the wheat kernel—bran, germ and endosperm—are separated and recombined accordingly to achieve different types of flours.

There are several types of flour including all-purpose, bread, cake, enriched white, self-rising, pastry, semolina, whole-wheat and gluten flour. Certain flours work better for certain baked products.

Whole Grain vs. Enriched White Flour

Much confusion exists about what makes a product whole grain versus what makes one enriched. Understanding the milling processes used to make both types of flour is key to learning the difference.

“Reconstituting,” or blending back together, all the parts of the wheat following purification in the proper proportions yields whole-wheat flour. Whole-wheat flour is rich in B-vitamins, vitamin E and protein, and contains more trace minerals and dietary fiber than enriched white flour.

In the case of enriched white flour, made with the endosperm only, the flour stream passes through a device that measures out specified quantities of enrichment (four B vitamins and iron). These vitamins and minerals are added in amounts equal to or exceeding that in whole wheat flour. The majority of all-purpose flour in the United States is enriched.