



Sifting Through the Flour Bouquet

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Written by Susan Gartrell, KAFCE State EPC

Have you strolled down the baking goods aisle of your local grocery store and found yourself doing a double take? Welcome to a new era in baking! Where in the past the only decision was whether to have bread flour or cake flour, self-rising or all-purpose flour; now a whole host of new flours are available to augment our baking needs! With attention to new and old milling processes, consumer emphasis on healthy, nutritious foods, and the introduction of food products from all corners of the globe, families can tickle their taste buds with anything their hearts fancy! Like a floral bouquet is made up of a variety of colors and fragrances; our FLOUR bouquet includes an assortment of flavors, textures, and options for the bold baker who wants try something new! The list of flours that can be purchased or milled at home is pretty extensive. This lesson is designed to give a quick overview with general guidelines about the different types of flours, and tips on how to substitute a new flour into your favorite recipe.

Educational Goals:

1. To gain knowledge about an assortment of flour products and their best uses.
2. To review the health benefits whole grains and flour products bring to our diets.
3. To discuss ways to replace gluten in favorite baked products.
4. To broaden our baking experiences with flour sources from other cultures.

Suggested Activities:

1. Have members compare a recipe made with all-purpose flour verses another flour.
2. Have a member or guest speaker share about baking with non-gluten flours.
3. Have members bring a baked product from home using the flour of their choice.
4. Take a field trip to a home-based or commercial flour mill.

Wheat Flour 101: Flour is a powder made by grinding raw grains, roots, beans, nuts, or seeds. Flour has been an important part of the human diet for at least 30,000 years. Flour is the major ingredient in bread and bakery products, providing unique textural, flavor, and visual characteristics. Every cook and baker has used a form of flour at some time.

Flour usually means wheat flour made from the most widely distributed cereal grain. Wheat is the only cereal grain that can be made into a cohesive, elastic dough when mixed with water. In addition to certain vitamins and minerals, wheat flour contains two important components, starch or carbohydrates, and protein. These components form the “crumb” of a baked good. Not all flour is equal, especially in the amount of protein available from the harvested grain. Some flours are best for making light, airy breads; others for making cakes or biscuits; and others still for making pizza. Some of the types of wheat flour on the market today are listed on the chart on the following page. A baker with a passion for a certain type of baked product will want to select the right type of flour before beginning a baking project.

Today, the flour most often used to make foods like bread and pasta is all-purpose flour which is a common pantry ingredient in many homes. All-purpose flour is known for its neutral flavor and excellent performance in baking a variety of goods. Its moderate gluten content enables it to form gluten strands, giving baked goods structure and allowing them to rise. This is particularly desirable in recipes that require a tender crumb, such as cakes and pastries.

To get greater health benefits from breads and baked goods, consumers add or replace refined flour with flours made from whole grains, such as whole wheat, rye, oat, buckwheat, and other whole grain flours. Whole grain flour has more fiber, more B vitamins, and more minerals, such as iron and magnesium, which are important for overall healthy bodies. Fiber especially helps regulate cholesterol levels, maintain blood sugar levels, and lower heart and blood vessel diseases. Baked products made from whole grain can be easily added to meals and snacks. Start by substituting 1/4 or 1/3 of the flour called for in the recipe with the whole grain flour of choice. Experiment with different proportions to get an acceptable final product.

Other Cereal Flours: As important as gluten is in baked products, potentially serious health complications occur when people develop wheat allergies, or have a gluten related disorders, such as celiac disease. Many of the alternative flours just mentioned and those listed made from other seeds and grains are gluten-free. Oats and barley are sometimes listed as gluten-free since they don't have the same type of gluten as wheat flour; but there is still a risk. Since the absence of gluten will affect the texture and rise of baked goods, additional liquid, binders, or leavening agents may be needed to prevent dryness and achieve more desirable results.

Many of our cereal flours are packed with nutritional goodness. Amaranth and quinoa contain the nine essential amino acids needed to be a complete protein. Buckwheat contains a whole list of important minerals, and millet contains three times more calcium than milk! The product label will have the complete list of nutritional information for each flour. Just remember when cooking with alternative flours, that the flavor of the product will be affected. It is recommended to combine a neutral flour, such as rice flour, with a stronger flavored flour to produce a more pleasing baked product. And, when using a new flour, it is important to follow package recipe directions and measure all ingredients accurately.

Some of the cereal flours now available in supermarkets are new to our country, but have been a staple part of diets in other parts of the world. This broadens the home cooked menu in many ways. Using from the list of cereal flours, families can make their favorite ethnic treats, like flatbread, mikate', or arepas, without traveling to another country!



Flours From Other Plants: Many other plants can be dried and ground-up into a flour or powder. The ones listed on the chart provided with this lesson are just a few of the many plant products that are being offered as flours. The end product will have the same flavor and nutritional properties as the original plant. Use of the plant flours can be an easy way to boost nutritional intake. For example, almond flour will have a higher healthy fat content; chickpea flour will boost protein and mineral values. Tapioca flour has little nutritional value, but it's starch content makes it a good binding agent. Coconut flour adds a distinct sweetness to cookies and pastas. This can be an advantage for those seeking to introduce a unique twist to their creations. However, the distinct flavors of some plant flours may not complement every recipe. All of these plant-based flours are gluten free, and most of them will cost more to buy than all-purpose flour. By exploring and utilizing different flours, individuals can broaden their culinary horizons and care for their health and well being.

While some flours can be used 1:1 as a replacement for all-purpose flour, others flours do better if blended, such as almond and coconut flours. It is best to follow replacement instructions which may recommend using less of the replacement flour or adding more water, oil, or eggs. The higher starch content of many plant flours requires more liquid to avoid dry, crumbly textures in the end product. Consideration should also be given to storage and shelf-life of alternative flours as the fat content of whole grains and other plants can affect the freshness of the flour.

In summary, we now have a variety of flours available as we expand our food horizons to include new favorites we would like to bake at home. When making an informed decision on what type of alternative flour to use, consider not only the health and nutritional aspects, but also desired use, taste and texture, versatility, availability, pricing, and storage concerns.



Resources:

1. Casa de Sante. Flour Guide. Online. Internet. (Undated)
<https://casadesante.com/blogs/flour-guide>
2. Mayo Clinic: *<https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating>*
3. Bob's Red Mill: "What is Tapioca Flour & Where Does It Come From?" October 29, 2022.
Internet. *<https://www.bobsredmill.com/blog/healthy-living/what-is-tapioca-flour?>*
4. Healthline. "14 Healthy Whole Grain Foods." Online. Internet. Updated February, 2023.
<https://www.healthline.com>nutrition>whole-grain-foods>
5. Whole Foods Market. Online. Internet. (Undated)
<https://www.wholefoodsmarket.com/tips-and-ideas/food-guides/whole-grains>

Reviewed by:

Heather Mentzer, Creative Home Baker, former FACS Teacher

Anna Muir, Director, K-State Research and Extension Phillips-Rooks Extension District #5