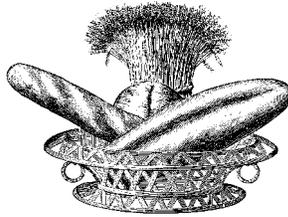




YOUR DAILY BREAD

THE ESSENTIAL INGREDIENTS

Bread has played a prominent role in Europe's sense of social relations and hierarchy. One's bread was determined by one's rank. White bread made from refined flour has been considered superior, while the poor and criminals ate unleavened barley cakes or coarse dark breads. Darker, whole grain bread is now thought to be more healthful and now the loaf of preference.



are a problem, place new flour in the freezer for several days. Store whole wheat and other whole-grain flours in the refrigerator to prevent the natural oils from turning rancid for up to three months.

Measure flour by spooning it lightly into a measuring cup and leveling off the top with a straight edge. Almost all commercial flours have been pre-sifted, so sifting is unnecessary most of the time.

Most recipes call for a varying amount of flour because different flours absorb different amounts of liquid. The softness or hardness of the wheat from which the flour was milled and the humidity in the air affects the absorbency. Use only just enough flour to produce the type of dough described in your recipe.

The Essential Ingredients

The ingredients that go into a loaf of bread are simple...flour, yeast, liquids and salt. But their combined effect is wonderfully complex. The nature of the ingredients, their proportion and the way they are combined makes a difference in the final product.



Wheat Flours

Mechanical rollers crack the wheat berry, allowing the germ and bran to be sieved off the endosperm. For whole grain flours, the germ and bran are then added back. Wheat flour is slightly yellow after milling. If allowed to age for one to two months, it turns white naturally through oxidation. But most wheat flour is quickly bleached using chlorine dioxide. Aging improves the baking qualities but because aging takes so much time and space, flours are usually chemically aged with potassium bromate or iodate. Bromated flour or those that contain ascorbic acid create higher-rising loaves.

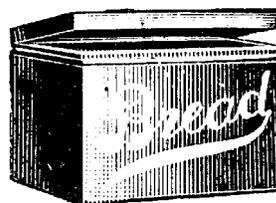
Store white flour in an airtight container in a cool, dry location. If properly stored, the shelf life of commercial flour is 15 months from the coded date on the back of the package. If weevils

- **All-purpose flour** is a blend of hard and soft wheats. Breads baked in a bread machine using all-purpose flour will be significantly smaller than those made from bread flour.
- **Self-rising flour** is simply all-purpose flour pre-blended with baking powder and salt. It is not recommended for bread machines.
- **Bread flour** is made from hard wheat- wheat with a high protein and low starch content. It is the preferred flour for making bread.
- **Enriched flour** has the B-vitamins and iron that are lost during milling added back.
- **Whole wheat flour** is milled from the whole kernel. When used alone, whole wheat flour produces a heavy, compact, dark bread. The germ and bran cut the developing gluten strands.
- **Whole wheat bread flour** is ground from hard wheat and has a higher gluten content. To create your own whole wheat bread flour, add one tablespoon gluten to each cup of whole wheat flour.

- ▣▣▣ **Graham flour** resembles whole wheat flour in taste but has less protein.
- ▣▣▣ **Durum flour** is made from the hardest of wheats. A bread made entirely from durum wheat is inedible.
- ▣▣▣ **Semolina flour** is durum flour minus the bran and wheat germ. It is usually used as a pasta flour, but can be used in breads.
- ▣▣▣ **Kamut flour** is a relative of durum wheat. It is high in protein, but low in gluten, so it must be combined with a higher gluten flour to produce an acceptable bread.

Other Grain Flours

- ▣▣▣ **Amaranth flour** is higher in protein, lysine, iron and calcium than most other grains. Use ½ cup of amaranth flour per loaf in combination with a wheat flour.
- ▣▣▣ **Barley flour** adds a nutty, malty flavor to a loaf. Use no more than one part barley flour to 3 parts wheat flour.
- ▣▣▣ **Buckwheat flour** has a full-bodied, earthy flavor. Use ½ cup of buckwheat flour per loaf in combination with a wheat flour.
- ▣▣▣ **Corn flour** has a sweet flavor. Use no more than 1 part corn flour to 4 parts wheat flour.
- ▣▣▣ **Cornmeal** gives a crumbly texture and sweet flavor. Add ½ cup of cornmeal per loaf.
- ▣▣▣ **Legume flours** are gluten-free and include pea, mung, lentil, soy and garbanzo beans.
- ▣▣▣ **Millet flour** adds a nut-like, sweet flavor. Use no more than one part millet flour to 4 parts wheat flour.
- ▣▣▣ **Oat flour** contains a natural antioxidant that will improve the shelf-life of bread. It adds a sweet earthy flavor but retains a light texture. Use one part oat flour to 3 parts wheat flour.
- ▣▣▣ **Potato flour** is made from steamed potatoes that have been dried and ground, imparting a definite potato flavor. To avoid lumping, mix it with the sugar and fat before adding liquids. It is a suitable flour for those on a gluten-free diet.
- ▣▣▣ **Quinoa flour** has a nutty taste that is usually used to make gluten-free pasta.
- ▣▣▣ **Rice flour** comes in both brown and white varieties. Brown rice flour contains the rice bran and germ. It has a nuttier, richer flavor than white rice flour and produces a darker loaf. Use one part brown rice flour to 4 parts wheat flour. Rice flour absorbs more liquid and absorbs it more slowly than wheat flour so adjust recipe mixing times accordingly.
- ▣▣▣ **Rye flour** is sold in both medium and dark varieties. Dark rye contains the bran. Medium rye sometimes does. Both produce a full-bodied, bitter, slightly sour flavor. For best results, use one part wheat flour to two parts medium rye or one part wheat flour to one part dark rye.
- ▣▣▣ **Soy and soya flour** are derived from soybeans. Soy flour is ground from raw beans and soya flour from lightly toasted beans. Both varieties have a high fat content. However it is possible to find them with less fat or as a nonfat flour. Soy and soya flours add a slightly sweet, pleasantly musty flavor to breads and improve shelf life. Use one part soy or soya flour to 4 parts wheat flour. Breads containing soy flour brown quickly so reduce the oven temperature about 25°F.
- ▣▣▣ **Spelt flour** contains enough gluten to be substituted for wheat flours. Those with allergies to wheat may be able to tolerate spelt wheat. Check with your physician first before substituting.
- ▣▣▣ **Triticale flour** is a cross between durum, rye and red winter wheat. It has a rye-like flavor but must be combined with a high-gluten wheat flour for an acceptable bread to be produced. Use a one to one ratio.



Whole Grains

For that added flavor, texture and wholesome goodness of whole-grain breads add wheat berries, whole oats, wheat bran or germ, bulgur, barley or kasha. Add as little as one tablespoon of whole grains per cup of flour or as much as ¼ cup of

whole grains per cup of flour to your breads. The more you add, the heavier and more crumbly the bread will be. Cook, toast or sprout whole grains depending on the variety.

Yeast

Yeast is a living plant that when fed the correct amount of food, moisture and warmth, multiplies rapidly. A small amount of sugar supports the growth of yeast, but too much slows the rate. Yeast is sold in two forms: *cake (compressed)* and *active dry yeast (standard and quick-rise)*. Yeast is heat sensitive. Too little and it will not multiply. Too much and it will die. Most yeasts are effective about 110°F with quick-rise active dry yeast tolerating a range of 90-115°F. A ¼-ounce packet of yeast equals 2¼ teaspoons of yeast. Quick-rise, rapid-rise or instant yeasts are all fast-acting yeasts. They live fast but die young so they are not well suited for multiple risings, long periods of fermentation or the long whole-wheat cycle of some bread machines. One 3/5-ounce cake of compressed yeast equals one ¼-ounce packet of active dry yeast. Compressed yeast is not recommended for bread machines. If you store the yeast in the refrigerator or freezer, do not bring it to room temperature by using the microwave.

Liquid

Liquid helps to distribute the yeast evenly in the flour and allows the sugar and salt to dissolve. *Water* generally yields crisper breads than a dough made with milk. *Milk* adds richness, makes a finer crumb and softer crust and can help retard staling. Scalding is no longer required since we drink pasteurized milk. If your dough appears dry, add one tablespoon of liquid at a time.

Fats

Butter, margarine, shortening and oil helps to produce a tender loaf with a brown crust. Fat also slows down the moisture loss that causes staling.

Salt

In addition to flavoring bread, salt helps control the rate of fermentation and makes the dough easier to handle.

Sweeteners

A yeast dough gets sweetness and a source of food for the yeast from sugar. Sugar also imparts tenderness to the crumb and color to the crust. There a wide variety of sugars that can add different flavors to your bread. When measuring sticky sugars such as honey or molasses, coat your measuring spoon with a small amount of oil first. The sugar will glide out easily.

One tablespoon sugar =

2 teaspoons honey =

¾ tablespoon maple syrup =

4 teaspoons molasses =

2 tablespoons corn syrup.

Eggs

Eggs give a rich flavor and color to breads. A large egg is equivalent to a scant ¼ cup liquid. Egg breads have a tendency to dry out faster than other breads.

Dough Enhancers

Dough enhancers are supplements that can increase gluten strength, aid the yeast's fermentation, convert starch into sugar or aid in emulsifying oils. Their optional use will often result in taller, lighter loaves that stay fresh longer. *Some common dough enhancers are gluten, diastatic malt powder (malting barley flour), lecithin, ascorbic acid (vitamin C) and potassium bromate.* Commercial dough enhancers may be a blend of these. Follow the package directions if you choose to use these.

Miscellaneous Ingredients

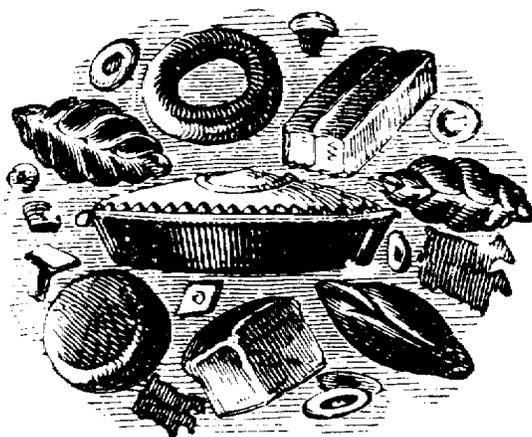
Seeds, raisins, nuts, chili peppers, potatoes, dairy products (sour cream, cheese, yogurt), flavoring and fruit add nutrients and flavor to your breads. Experiment or follow your recipe for best results.

Packaged Bread Machine Mixes

There are many wonderful tasting packaged mixes on the market. They are convenient and excellent for the Delayed Bake Cycle. If you have a new bread machine, try these first. They will encourage you to use different cycles on your machine and give you the confidence to try bread recipes. Mixes are expensive but convenient when you are too busy to bake your daily bread using conventional methods.

References

1. *The Bread Machine Magic Book of Helpful Hints*, Linda Rehberg & Lois Conway, 1995.
2. *Getting the Most From Your Bread Machine*, Sandra Bastin, 1996.
3. *Holiday Ideas for Your Bread Machine*, Sandra Bastin, 1996.
4. *On Food & Cooking*, Harold McGee, 1984.
5. Red Star Active Dry Yeast, 1-800-445-4746.



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