

Cooking with Grains

There are a number of grains, each having distinctive chemical characteristics and flavor qualities. A whole new world of eating experiences comes with each line of grain. Rice, for instance, can be cooked until dry and used with a number of sauces, spreads, gravies, and soups. By simply increasing both the cooking time and the amount of water, the end product is creamy and can be used as a porridge for breakfast; can be congealed, sliced and baked; or can be shaped into patties while still hot and seasoned with a variety of herbs. Rice can be ground into coarse flour; wet with water and steamed to make a rice cake. It can be made sweet or savory by adding your favorite seasonings and nuts. For each grain the number of different cooking styles are as varied as the number of grains. A cookbook with a good section on grains is a valuable asset to any kitchen. We recommend the following books to learn more about using grains in your diet: Eat For Strength by A. Thrash; Laurel's Kitchen by L. Robertson; Diet for a Small Planet by F.M. Lappe; Foods that Heal by B. Jensen; Surviving the Nineties: Coping with Food Intolerances by D. Thom; and Complete Book of Natural Foods by F. Rohe.

Processing of Grains

The whole grain consists of the bran, germ and endosperm. Refined grains no longer contain the bran and often do not contain the germ. The bran contains fiber, B vitamins, fats, minerals, and protein. The germ has protein, fat, and vitamins A, B, and E. The endosperm is the part that is left after milling and is a source of complex carbohydrates. Two features of processing grains diminish their wholesomeness: (1) the polishing, and (2) failure to cook a sufficient length of time. Grains grow in such a way that the vitamins and minerals are found almost exclusively on the outer layer. Milling generally removes this layer, leaving a white, easily ground, central kernel or endosperm. This kernel is devoid of most vitamins and minerals. Beaching flour is another method of removing vitamins and minerals. Many of the minerals found in grains are required in the metabolism of protein.

Long, Slow Cooking

Many people fail to cook grains long enough to release the chemical bonds that hold the nutrient molecules and our digestion is not strong enough to completely split many of the molecules in grains. This can cause some distress in the colon from gas or acids. We may also fail to receive all the nutrients possible from the whole grain. The harder grains need more than an hour of cooking, and slow cooking is recommended to provide the most benefit.

The Grains

Amaranth: This Aztec grain is rich in lysine and makes a complete protein when combined with other grains. Amaranth does not contain gluten. It can be cooked as a cereal and can be bought as a packaged cereal or crackers. It has good baking qualities when mixed with whole-wheat flour. Cook 1 cup amaranth to 1½ cups water for 20-25 minutes to yield 2 cups.

Barley: This grain grinds into a very fine, white flour that can be used to make white gravies and to vary white grain breads. Barley flour will be a whole grind only if you can find unhulled barley (not pearled), and it may be called blue or gray barley. The pearling removes more than thirty percent of the grain. It is high in malt and has a delightful, mild flavor. Cook 1 cup barley to 3 cups water for 1 hour 15 minutes to yield 3½ cups.

Buckwheat (Kasha): This seed is actually not one of the grains, but because of its nutrient makeup it is widely used in the same fashion as grains. It has a fairly strong flavor so when used whole or as flour mix it with one of the more bland grains such as corn, rice, or millet. It has a high biologic value and is rich in vitamins and minerals such as B, E, and calcium. It deserves much greater popularity than just as buckwheat griddlecakes. Cook 1 cup buckwheat to 2 cups water for 15 minutes to yield 2½ cups.

Corn: Corn was first grown in North America and continues to be the most widely used grain in this country. Corn germ is a complete protein rich in lysine and has 33% more vitamin E, more iron and zinc, and twice as much fiber as wheat germ. It has many uses in hotcakes, griddlecakes, and waffles, mixed with soybean flour to make raised cornbread, chapattis, corn chips, enchiladas, and tortillas. Coarse cornmeal is called polenta or grits. Grits can be used as a breakfast porridge, congealed porridge sliced and baked, or mixed with other grains. Grits can be served with a variety of fruit sauces, nuts or soy spreads, soy sour cream, etc. Cook 1 cup polenta to 4 cups water for 20-25 minutes to yield 3½ cups.

Kamut: This ancient grain from Egypt is a relative of durum wheat but is often tolerated by people with wheat sensitivity. It contains gluten and more protein and other nutrients than wheat. The whole grain can be used in casseroles or soups if soaked overnight. Cook 1 cup kamut flakes to 2½ cups water for 20-30 minutes to yield 4 cups.

Millet: Millet is a cereal commonly used in Europe that has gained much popularity in this country. It has a bland flavor and can be served like rice or corn. Cook 1 cup millet to 3 cups water for 45 minutes to yield 3½ cups.

Oats: This is one of our more common cereal grains with high nutritional value. It can be used as a whole grain, cooked as a breakfast food, used to give body to casserole dishes and stews, and to make patties or burgers. This important grain has many uses and should not be thought of merely as “oatmeal”. Cook 1 cup oats to 2 cups water over low heat for 20-25 minutes to yield 1¾ cups.

Quinoa: Quinoa comes from the Andean mountains of South America and was a staple food for the Incas. It contains more protein than any other grain, roughly 16.2% compared with 14% for wheat and 7.5% for rice. It is also a complete protein. Quinoa is quick cooking and easy to digest. The flour can be used in baking and is low in gluten. Rinse the seeds before cooking to remove the bitter tasting resin covering the seed. Cook 1 cup quinoa to 2 cups water for 15-20 minutes to yield 3 cups.

Rice: The most important grain in the economy of the Orient, rice has kept much of China alive and healthy for the last three centuries. Only after polishing the grain became a common practice did nutritional deficiencies exist in China. Brown rice has 12% more protein, 33% more calcium, more B vitamins, potassium, and iron than white rice. Brown rice can be eaten whole or used as flour. When added to whole-wheat flour (up to 25%) it makes bread more dense, moister, and smoother. Cook 1 cup brown rice to 2 cups water for 1 hour to yield 3 cups.

Rye: This hardy grain is widely grown for its grain as well as its straw. It can be used as either flour (fine grind) or meal (course grind). The flour made from rye should be used to vary the nutritive content of breads, to make gravies, and to thicken soups and casserole dishes. One may add 1-2 cups of rye to whole-wheat flour in making bread.

Soy: Soybeans can be ground to produce flour that is high in protein and zinc. The taste of soy is rather bitter due in part to its processing. Soy flour should never be eaten raw because it contains an enzyme that inhibits protein digestion, cooking destroys this enzyme. Maximum protein complementarity can be achieved by adding ¼ cup of soy flour to every cup of wheat flour. Cook 1 cup soybeans to 4 cups water for 3-4 hours to yield 2 cups.

Spelt: Spelt is related to wheat and contains gluten, but is often tolerated by people with a wheat sensitivity. It can be used in baking, cooking, and pastas. Spelt can be used in the same proportions as wheat flour and substituted one to one. Cook 1 cup coarsely ground spelt, spelt flakes or farina to 2 cups water for 30 minutes to yield 3 cups.

Teff: Teff is a cereal that comes from eastern Africa and Ethiopia. It is a good source of calcium and iron and has high protein content. The grain may be ground into flour or used cooked or uncooked in many recipes. Uncooked, teff can be used as a substitute for nuts and seeds in baked goods. It is small and has a high density so use less teff than you would seeds (substitute ½ cup teff for 1 cup sesame seeds). When cooked, teff has a gelatinous consistency. It can be used in baking, breads, cookies, soups, casseroles, stews, and puddings. Cook 1 cup teff to 3 cups water for 15-20 minutes to yield 3 cups.

Triticale: This grain is a cross between two different types of wheat and rye. It is higher in protein than most wheat and contains enough gluten to use for making breads. Cook 1 cup triticale to 4 cups water for 20-25 minutes to yield 4 cups.

Wheat: There are many grains in this group of cereal grasses. Each of the different species has a somewhat different amino acid content as well as vitamin and mineral spectrum. Wheat is used to make whole wheat and white bread. Like rice, wheat has the major nutritive properties removed in the milling process. White flour keeps longer because of the separation of the vitamin and mineral bearing oils that are likely to become rancid. We recommend whole-wheat flour instead of white flour for all cooking and baking needs. Cracked wheat is wheat that has been broken up into small pieces and bugler is cracked wheat that has been toasted or partially cooked. Durum is wheat flour that is used for pasta products and semolina is refined durum flour. Couscous is made of either durum wheat or millet. Cook 1 cup cracked wheat to 2 cups water for 25 minutes to yield 2¹/₃ cups. Cook 1 cup whole-wheat berries to 3 cups water for 2 hours to yield 2²/₃ cups.

Reference:

D. Thom. Surviving the Nineties: Coping with Food Intolerances. (Portland: Better Impressions, 1992).