

## Selecting and Storing Legumes

Legumes' packaging should be intact with no rips or holes. Canned legumes should be dent free. Beans and peas are also available fresh, canned, dried, or frozen.

Store legumes in a cool, dry, well-ventilated area, away from light and excessive heat. Always discard any beans or peas that appear moldy, damp, or wrinkled. It is possible to keep dried beans for one to two years; however, they are best when they are used within six months of purchase.

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### Essential Skills

#### *Softening Dry Beans*

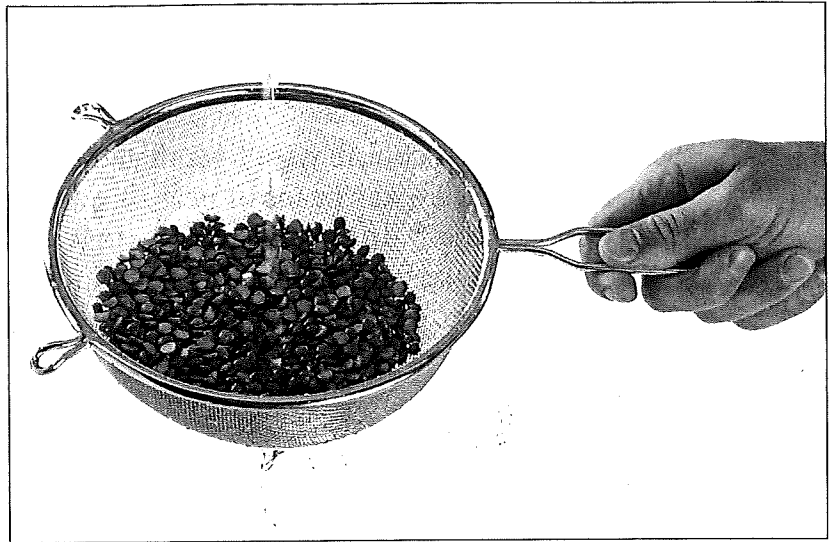
- ❶ Dry beans are not ready to eat, of course. They need some attention first.
- ❷ Rinse the dust off of them and sort out any pebbles or shriveled beans. This is best done on a white plate or surface, so you can see what you've got.
- ❸ Soaking dry beans softens them prior to cooking. Boiling dry beans in water for 2 minutes, then allowing them to soak for 1 hour prior to cooking will soften beans as well as an overnight soaking in cold water. Some beans and peas will actually soften better after this brief boiling.
- ❹ If salt is added to the soaking water, or the tap water used is very hard (high mineral content), the beans might not soften. Hard chemical complexes and hydrophobic bonds can form between molecules, preventing softening. Remember: Soft water, soft beans.
- ❺ Be sure to discard the soaking water, rinse the beans again, and cover with clean water. Then cook.
- ❻ Early in cooking, add salt for seasoning and to improve the flavor of the beans. Add an acid, like tomatoes, early in the cooking to lengthen the time required to soften the beans. Add a small amount of soda (no more than  $\frac{1}{8}$  teaspoon per cup of dry beans) to shorten the cooking time. Adding too much soda makes the beans bitter, dark, and mushy. Cook them until they are soft. Flavor the beans for recipes when they are fully cooked and softened.

*Remember:* The longer dry beans are stored, the longer they take to soften.

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## ***Cooking Legumes***

Rinse legumes before cooking. In some cases, soak legumes before cooking. Check dried legumes for dirt, stones, and other debris prior to washing by placing the product on a sheet pan. Place legumes in a large **colander** or **sieve** and rinse



**Figure 11.10:** Before cooking legumes, rinse or soak them.

well with cold running water to remove any dust or dirt particles. Then follow the procedure reviewed in the Essential Skills: Softening Dry Beans. Figure 11.10 shows legumes being rinsed.

Cook legumes before they are eaten to develop their flavor, to remove harmful substances, and to make them easy to chew and digest. Cook them so they are firm to the bite. Table 11.3 identifies the soaking and cooking times for various dried legumes.

You can serve legumes in many ways—soups, stews, salads or as side or main dishes. Red beans, for instance, are often served as a vegetarian dish in red beans and rice. Black beans are popular in Mexican cooking. Kidney beans are usually served in chili, bean salad, and Cajun dishes. Chickpeas are the basis for hummus. Soynuts are a popular snack and used as a garnish in salads.

**Table 11.3: Soaking and Cooking Times for Dried Legumes**

Type	Soaking Time	Cooking Time
Adzuki beans	4 hours	1 hour
Black beans	4 hours	1½ hours
Black-eyed beans	n/a	1 hour
Chickpeas	4 hours	2–2½ hours
Fava beans	12 hours	3 hours
Great Northern beans	4 hours	1 hour
Kidney beans	4 hours	1 hour
Lentils	n/a	30–40 minutes
Lima beans	4 hours	1–1½ hours
Mung beans	4 hours	1 hour
Navy beans	4 hours	2 hours
Peas, split	n/a	30 minutes
Peas, whole	4 hours	40 minutes
Pink peas	4 hours	30 minutes
Pinto beans	4 hours	1–1½ hours
Soybeans	12 hours	3–3½ hours

**[nutrition]****Sprouts of Mung Beans, Chickpeas, and Alfalfa**

"Sprouts" is a category for a legume or grain that has started to germinate and sprout into a plant, changing it to another type of food. Sprouts are great on salads, sandwiches, and in Asian dishes, boosting the total nutritional content of the meal.

Mung beans are used extensively in Asia and the Middle East for a variety of uses. When sprouted in water under limited daylight, these sprouts are pale, watery, crunchy, and mild. They are commonly referred to as "bean sprouts," and are readily available in the United States.

Chickpeas, also known as garbanzo beans, can also be sprouted. These sprouts have a bit more of the original starchy seed intact and recognizable. They are great in salads and are more filling than their lighter fellow sprouts.

Unlike mung bean or chickpea sprouts, alfalfa sprouts are bright green and a good source of vitamins, minerals, and colorful chlorophyll. Since alfalfa seeds are actually legumes, they provide a bit of protein in their sprouts, just like the other beans. They are very light and nutty, adding a crispy, leafy freshness to sandwiches and salads.

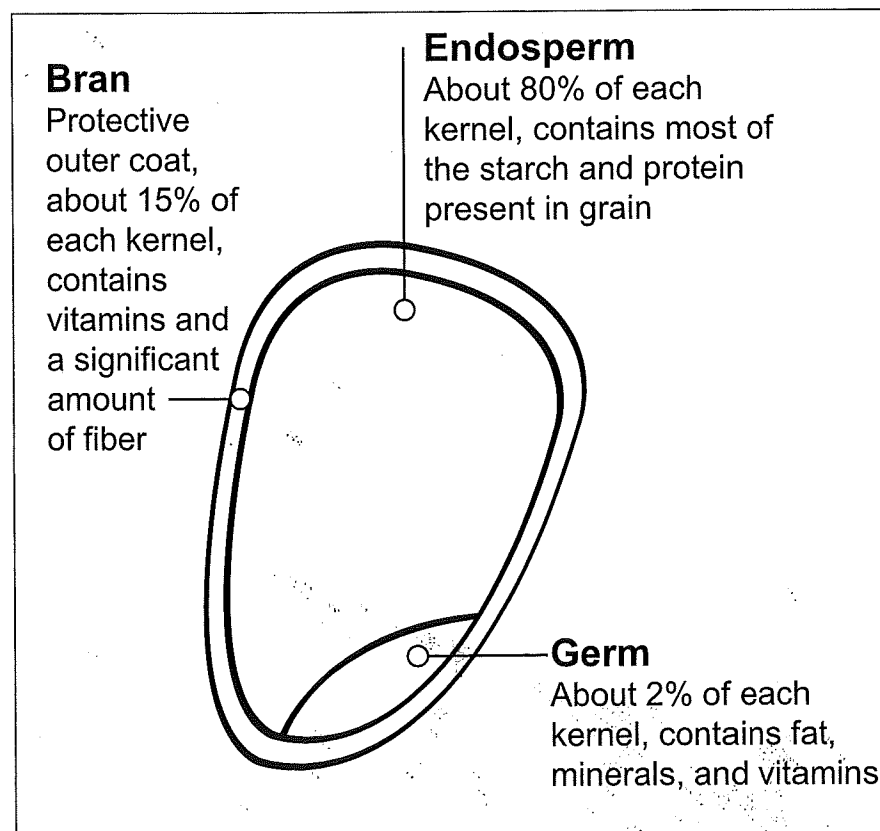
Many other grains and legumes can be sprouted. In reality, they are all seeds genetically coded to sprout. Some, including kidney beans, are toxic when sprouted, so investigate before any experimentation with sprouts.

## Grains

**Grains** are grasses that grow edible seeds. Grains, along with **meals** and flours, are essential for everyday cooking. **Whole grains** are grains that have not been milled. In the **milling process**, the germ, bran, and **hull** of the grain are removed or polished. The **hull** of a whole grain is the protective coating, or husk, that surrounds the grain. **Bran**, a great source of fiber and B vitamins, is the tough layer surrounding the endosperm. The **endosperm** is the largest part of the grain and a major source of protein and carbohydrate. The smallest part of the whole grain is the **germ**. It is important because it provides a trace of fat and is rich in thiamin. Figure 11.11 shows the parts of a grain.

Grains that are ground and broken down are often referred to as **stone ground**. In this process, the grains retain more of their nutrients because the germ, bran, and hull are left intact.

Table 11.4 describes various grains, meals, flours, and starches and their common culinary uses.



**Figure 11.11:** Parts of a grain.

<b>Table 11.4: Grains, Meals, Flours, Starches</b>			
	<b>Type</b>	<b>Description</b>	<b>Common Culinary Uses</b>
WHEAT	Berries/ Whole	Unrefined or minimally processed whole kernels; light brown to reddish-brown; somewhat chewy texture; nutty flavor	Hot cereal, pilaf, salads, breads
	Cracked	Coarsely crushed, minimally processed kernels; light brown to reddish-brown; somewhat chewy texture; nutty flavor	Hot cereal, pilaf, salads, breads
	Bulgur	Steamed, dried, and crushed wheat; fine, medium, or coarse; light brown in color; tender; mild flavor	Hot cereal, pilaf, salads (Tabbouleh)
	Bran	Separated outer covering of wheat kernel; brown flakes; mildly nutty flavor	Hot and cold cereals, baked goods (bran muffins); used to increase dietary fiber
	Germ	Separated embryo of wheat kernel; small, brown, pellet-like; strong nutty flavor; available toasted and raw	Hot and cold cereals, baked goods; used to increase nutritional values in food
	Ebly®/ Tender	Soft, parboiled durum wheat; resembles plump grains of rice in raw state; resembles pearl barley when cooked; subtly mild flavor; available raw or cooked	Soups, salads, side dishes, entrées, desserts
	Farina	Polished, medium-grind wheat; white; flour-like; very mild flavor	Hot cereal
WHEAT FLOUR	Whole	Hard wheat; the entire kernel is finely milled; light-brown color; full, nutty flavor; graham flour is whole wheat flour with a coarser grind	Baked goods, pasta
	All-purpose	Blend of hard and soft wheat; the endosperm is finely milled; off-white color; usually enriched, may be bleached	Baked goods, pasta, thickening agent
	Bread	Hard wheat; the endosperm is finely milled; off-white color; usually enriched, may be bleached; also known as patent flour	Bread, soft rolls
	Cake	Soft wheat; the endosperm is very finely milled; pure white flour; polished soft wheat kernels; usually enriched and bleached	Cakes, cookies
	Pastry	Soft wheat; the endosperm is very finely milled; pure white flour; polished soft wheat kernels; usually enriched and bleached	Pie dough, muffins, biscuits, pastries

continued

<b>Table 11.4: Grains, Meals, Flours, Starches <i>continued</i></b>			
	<b>Type</b>	<b>Description</b>	<b>Common Culinary Uses</b>
	Durum	Hard wheat; the endosperm from a durum wheat kernel is finely milled	Bread
	Semolina	Durum wheat; the endosperm is coarsely milled; pale yellow	Pasta, gnocchi, puddings; used to make couscous
RICE	Brown	Whole grain, with the inedible husk removed; light brown; chewy texture; nutty flavor; available as short, medium, or long grain	Pilaf, salads
	White/ Polished	Husk, bran, and germ removed; white color; mild flavor; available as short, medium, or long grain	Pilaf, salads; short grain used to make rice pudding
	Converted/ Parboiled	Unhulled grain soaked and steamed before the husk, bran, and germ are removed; fluffy, separated grains when cooked; very light-brown color	Pilaf, salads
	Basmati	Extra-long grain; fine, delicate texture; aromatic, nutty flavor; aged to reduce moisture content; available as brown or white rice; popcorn rice is a variety of basmati	Pilaf, salads
	Jasmine	Aromatic, nutty flavor	Pilaf, steamed, rice pudding
	Arborio/ Italian	Very short, very fat grain; high starch content; off-white; creamy when cooked; also known as Italian rice; varieties include Carnaroli, Piedmontese, and Vialone Nano	Risotto, pudding
	Calaspara	Very short, very fat grain; high starch content; off-white; creamy when cooked	Paella
	Wild	Long, thin grain; dark brown; chewy texture; nutty flavor; marsh grass, unrelated to regular rice	Salads, stuffing; often combined with brown rice
	Sticky/ Pearl/ Glutinous/ Sushi	Round, short grain; very starchy; sticky when cooked; sweet, mild flavor	Sushi
	Rice flour	White rice that has been very finely milled; powdery, white; mild flavor	Thickening agent; baked goods

*continued*

**Table 11.4: Grains, Meals, Flours, Starches continued**

	Type	Description	Common Culinary Uses
	Heirloom	Varieties include Bhutanese Red, Forbidden Black, and Kalijira rice	Salads, stuffing; often combined with brown rice
CORN	Hominy	Dried kernels soaked in lye to remove the hull and germ; available canned or dried	Succotash, casseroles, soups, stews, side dishes
	Grits	Ground hominy; available in fine, medium, and coarse grinds	Hot cereal, baked goods, side dishes; popular in the southern United States
	Masa	Dried kernels; cooked and soaked in limewater, then ground into dough; pale yellow; moist; variation: masa harina, dried and ground to a fine flour; must be reconstituted to make a dough	Used to make tortillas, tamales, and other Mexican dishes; masa harina often used in baked goods
	Cornmeal	Dried kernels; ground to fine, medium, or coarse texture; colors: white, yellow, or blue; variations: corn flour (finely ground); polenta (coarse-ground)	Hot cereal, baked goods; coating items for sautéing or pan-frying
	Cornstarch	Dried kernels; hull and germ removed; ground to a powder; pure white	Thickening agent (slurry); baked goods; coatings
OATS	Groats	Hulled, usually crushed grain, especially oats, but can be wheat, buckwheat kasha, or other cereals	Hot cereal, salads, stuffing
	Rolled/ Old-fashioned	Groats, steamed and flattened; very pale brown, almost white; round, flake-like; tender; also available: "quick-cooking" and "instant"	Hot cereal (oatmeal), granola, baked goods
	Steel-cut/ Irish/ Scotch	Groats, cut into pieces; brown; chewy	Hot cereal, baked goods
	Bran	Outer covering of the oat	Hot and cold cereals, baked goods
	Flour	Groats, milled into a fine powder	Baked goods
OTHER GRAINS	Buckwheat	Whole or milled into flour; light brown; mildly nutty flavor	Hot cereal, pilafs; flour is used for pancakes, blinis, baked goods

*continued*

**Table 11.4: Grains, Meals, Flours, Starches continued**

	Type	Description	Common Culinary Uses
	Kasha	Hulled, crushed kernels (buckwheat groats); roasted; reddish-brown; chewy texture; toasty, nutty flavor	Pilafs, salads
	Millet	Whole or milled into flour; bland flavor	Hot cereal, pilafs; flour is used for puddings, flatbreads, cakes
	Sorghum	Commonly boiled to a thick syrup	Porridge, flatbreads, beer, syrup,
	Rye	Whole, cracked, or milled into flour; ranges from light to dark brown; dense; pumpernickel flour is very dark, coarsely ground rye	Pilafs, salads; flour is used for baked goods
	Teff	Whole; extremely tiny; light to reddish-brown; sweet, chestnut-like flavor	Soups, casseroles; thickening agent
	Amaranth	Whole or milled into flour; greens are also eaten; color ranges from white to tan, gold, or pink; sweet flavor	Hot and cold cereals, pilafs, salads
	Spelt	Whole or milled into flour; moderately nutty flavor	Pilafs, salads; flour is used for baked goods; substituted for wheat flour for people with wheat allergies
	Job's Tears	Whole; small; white; slightly chewy texture; grass-like flavor	Pilafs, salads
	Quinoa	Whole or milled into flour; very tiny circles; off-white; mild flavor	Pilafs, salads, puddings, soups
	Barley	Hulled and Pearl (hull and bran removed); varieties: grits, flour; tan to white; nutty flavor	Pilafs, salads, soups; used to make whiskey and beer

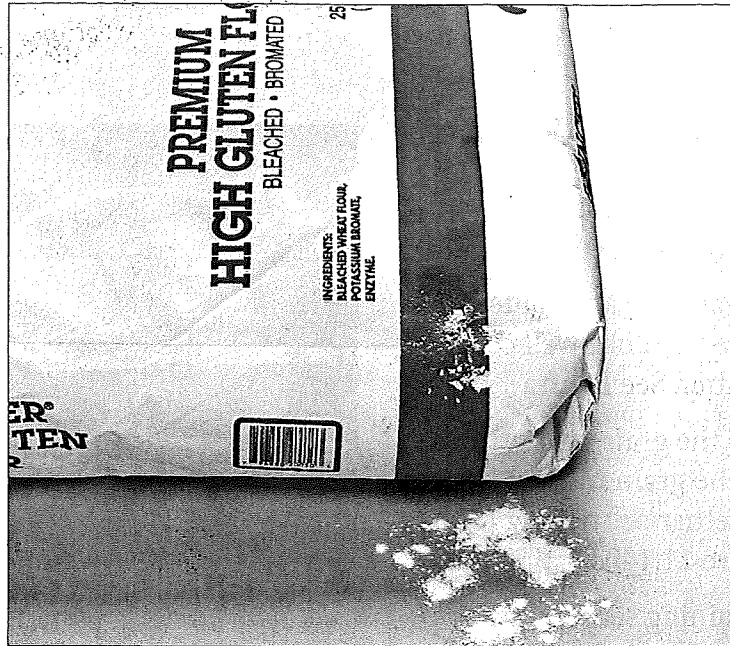
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## Selecting and Storing Grains

Whole grains have a shorter shelf life than milled grains. Purchase whole grains in quantities that can be used within three weeks. Carefully inspect grains when they are delivered. Check bags, boxes, and all containers to make sure they are intact, clean, and in no way below standard.

Store dry grains at least six inches above floor level on shelves in a dry, ventilated, and accessible area. Whole grains should be stored in the freezer. Brown rice and wild rice should be refrigerated. Figure 11.12 on the following page shows a grain product that should be rejected during receiving.





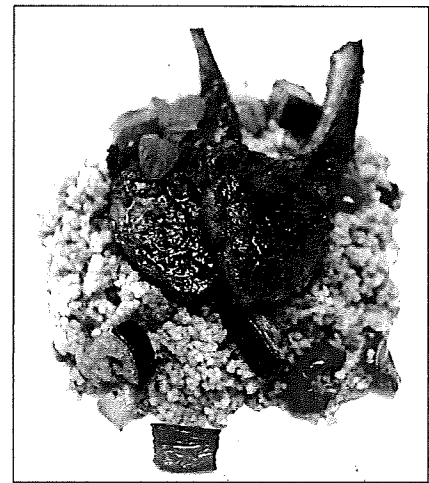
**Figure 11.12:** Reject grain products with packaging that has holes, tears, or signs of prior wetness.

## Cooking Grains

Like legumes, soak grains before cooking them. For example, water softens the outer layer, or bran, of whole grains such as barley and buckwheat. This makes them easier to cook. Food preparers can select from several ways to cook grains, including steaming, pilaf, and risotto.

Cook steamed grains in a double boiler with a perforated bottom over simmering or boiling liquid. Properly steamed grains should be tender to the bite and have a good flavor.

**Pilaf** (PEEL-ahf) is a technique for cooking grains in which the food preparer sautés the grain briefly in oil or butter and then simmers it in stock or water with various seasonings. In the pilaf method, first heat the grain in a pan, either dry or with oil, and then combine it with hot liquid and cook in the oven or on the stove top. The grains will be tender, remain separate, and have a pleasing, nutty flavor. To give rice a particular flavor or color, add vegetable or fruit juice to the liquid. Use a soup base or replace the liquid with a flavored stock. Use an acid, such as tomato juice, to increase the cooking time up to 15 minutes. Figure 11.13 shows plated bulgur wheat pilaf as a side dish to lamb.

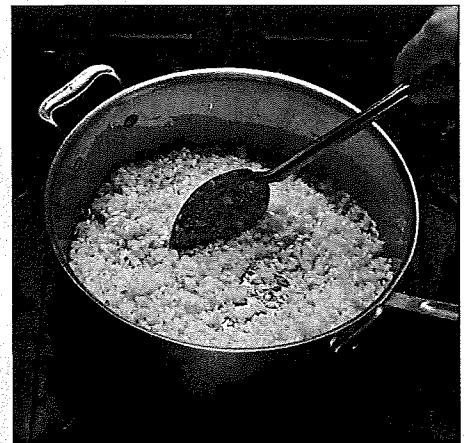


**Figure 11.13:** Plated bulgur wheat pilaf as a side dish to lamb.

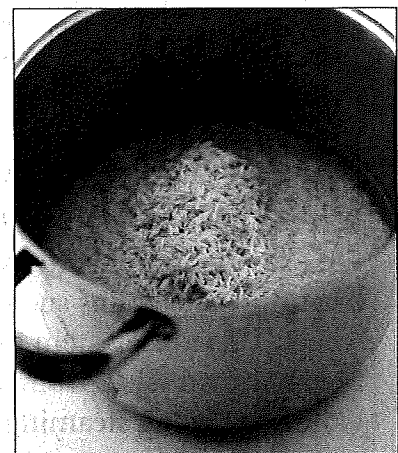
## Essential Skills

### *Making Pilaf*

- ① Heat oil or butter in a pan.
- ② Add onions and sauté, stirring frequently until softened.
- ③ Add grain all at once and sauté, stirring frequently until well coated with oil or butter. See Figure 11.14a.
- ④ Add liquid to the grain and bring to a simmer. Stir the grain to keep it from clumping together or sticking to the pan. See Figure 11.14b.
- ⑤ Add any remaining seasonings or flavors.
- ⑥ Cover the pot and finish cooking the pilaf either on the stovetop over low to moderate heat or in the oven. Do not stir the pilaf as it cooks.
- ⑦ The grains are done when they are tender but not mushy. See Figure 11.14c.
- ⑧ Remove from heat. Let pilaf rest for 5 minutes.
- ⑨ Serve while pilaf is still hot.



**Figure 11.14a:** Step 3—Adding grain.



**Figure 11.14b:** Step 4—Adding liquid to grain.



**Figure 11.14c:** Step 7—Grains are done.