

August 26, 2012

# DIY Grinding Your Own Grains

DISCOVER DIFFERENT KINDS OF SPECIALTY GRAINS, FROM THEIR TASTES AND TEXTURES TO DELICIOUS SERVING SUGGESTIONS.



**Amaranth**  
**Origin:** Central America  
**Character:** Grassy and earthy with a hint of pepper and slightly sticky when cooked.  
**Culinary Uses:** Though amaranth is treated and eaten like a grain, it is actually a gluten-free seed full of nutritious amino acids. Amaranth can be popped like popcorn, cooked as a grain or ground into flour, which yields dense baked goods.



**Barley**  
**Origin:** India, Ethiopia and South America  
**Character:** Sweet, earthy, malty and chewy.  
**Culinary Uses:** One of the oldest known foods, barley is used to brew beer and often ground into flour to add malty flavor to baked goods.



**Buckwheat**  
**Origin:** East Asia  
**Character:** Nutty, earthy, light and slightly chewy.  
**Culinary Uses:** Despite its name, buckwheat is not wheat but another gluten-free plant cooked like a grain. Historically, buckwheat has been cooked into porridge or dumplings; it is also a key ingredient in soba noodles.



**Bulgur**  
**Origin:** Middle East  
**Character:** Nutty, wheaty, mild with a texture that is somewhat coarse and chewy.  
**Culinary Uses:** Quick-cooking bulgur, often referred to as Middle Eastern pasta, is made by boiling, drying and cracking wheat, then removing the outer layers of bran. Bulgur is a primary ingredient in classic tabouli. It can be added to soups and meatballs and cooked into a pilaf.



**Corn**  
**Origin:** Americas  
**Character:** Sweet, toasted, usually coarse and toothsome.  
**Culinary Uses:** Different varieties of corn are best in different applications. Some corn may be eaten fresh from the cob, while the dried kernels of other varieties can be ground into cornmeal, polenta or grits.



**Emmer**  
**Origin:** Middle East  
**Character:** Nutty, slightly sweet, full-bodied, firm and chewy.  
**Culinary Uses:** A versatile heirloom grain, emmer flour can be used for flatbreads, pastas, biscuits or crackers; or to add flavor to leavened breads. It is also delicious whole, in a grain salad or pilaf.



**Kamut**  
**Origin:** Africa  
**Character:** Rich, sweet, buttery and firm.  
**Culinary Uses:** An ancient, high-protein variety of wheat, kamut is the commercial name for khorasan wheat. Whole kamut grains can be soaked and added to salads, while kamut wheat is also baked into breads and other baked goods and used in pastas and beer.



**Millet**  
**Origin:** East Asia  
**Character:** Very mild and nutty; fluffy or creamy, depending on how it is cooked.  
**Culinary Uses:** Naturally gluten-free millet was used to make noodles in ancient China, but in subsequent years millet porridge became popular throughout the world. It cooks quickly and may be eaten in sweet or savory dishes, milled into flour or used in alcoholic beverages.



**Oats**  
**Origin:** Middle East  
**Character:** Sweet, nutty, creamy and chewy.  
**Culinary Uses:** Most commonly, oats are cooked into porridge and toasted and incorporated into muesli. Instant, old-fashioned rolled and steel-cut oats are typical varieties, along with whole grain oats, or groats.



**Rice**  
**Origin:** China  
**Character:** White rice is sweet and mild, while brown rice is richer and nuttier. The texture depends on how it is cooked; it may be sticky and chewy, firm or tender with a slight bite.  
**Culinary Uses:** Rice is usually boiled or steamed to serve alongside a protein or main dish. It can also be cooked into a risotto, rolled into sushi or grape leaves, or sweetened for desserts, such as rice pudding.



**Rye**  
**Origin:** Eastern and Central Europe  
**Character:** Tangy, hearty, slightly spicy, sticky and dense.  
**Culinary Uses:** Rye flour is used to add flavor to breads, such as pumpernickel. It also adds its bold, distinctive flavor to rye whiskey.



**Spelt**  
**Origin:** Europe  
**Character:** Nutty, sweet, mild and chewy.  
**Culinary Uses:** Spelt flour is easy to work with, ideal for pastas, breads and other baked goods. The whole grains may be soaked overnight and cooked in fresh water until tender—the cooked grains can be added to salads and soups. Rolled spelt flakes can be prepared and eaten like oats.

Most cooks understand the importance of fresh, local and homegrown ingredients, such as sweet heirloom tomatoes from the farmers' market and herbs picked right in your backyard. Grains are no different. Once you taste the delicious, nuanced flavor of specialty heirloom grains, you can begin to think about wheat, corn, oats and more in a new way.

Modern farmers are experimenting with growing heirloom grains and grinding them in small batches. The resulting flours are entirely distinct from the shelf-stable flours at supermarkets. Specialty grains have character and variety, and may be tricky to work with at first due to different gluten contents and textures, but their uniqueness is exactly what makes them worth the effort.

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## Emmer Focaccia

*Thick, chewy and fragrant with rosemary and garlic, this focaccia just needs a drizzle of olive oil to make a perfect meal.*

In the bowl of an electric mixer, using a handheld whisk, whisk together the water, yeast and ground emmer wheat and let stand until slightly foamy, about 10 minutes. Add the all-purpose flour, sugar, 2 Tbs. of the olive oil, the table salt and garlic.

Fit the mixer with the dough hook and beat on low speed until the dough begins to pull away from the sides of the bowl and form a ball, about 10 minutes. Transfer the dough to a well-floured work surface and gently shape into a ball.

Coat a baking sheet with 1 Tbs. of the olive oil. Place the dough on the baking sheet and coat the top with the remaining 2 Tbs. olive oil. Wrap the baking sheet loosely with plastic wrap and place in a warm spot (about 80°F) until the dough has doubled in volume, about 1 hour.

Preheat an oven to 450°F.

Remove the plastic wrap from the baking sheet and gently stretch the dough evenly until it covers the bottom of the sheet. Using your fingertips, press gently into the dough to create small dimples evenly over the surface. Sprinkle the dough with the fleur de sel and rosemary. Wrap the baking sheet loosely with plastic wrap and place in a warm spot (about 80°F) until the dough has almost doubled in volume and is soft to the touch, about 30 minutes.

Remove the plastic wrap from the baking sheet. Bake until the focaccia is lightly browned on the surface and springs back lightly when pressed, 13 to 15 minutes. Remove from the oven and drizzle the focaccia with extra-virgin olive oil. Let cool for 10 minutes before cutting into squares. Makes 24 squares.

Recipe Courtesy of Dan Barber, Blue Hill.

1½ cups water, at room temperature  
 4 tsp. active dry yeast  
 2 cups finely ground emmer wheat  
 2½ cups all-purpose flour, plus more for dusting  
 1 tsp. sugar  
 5 Tbs. olive oil  
 1¾ tsp. table salt  
 1 garlic clove, finely minced  
 ½ tsp. fleur de sel or kosher salt  
 1 tsp. chopped fresh rosemary  
 Extra-virgin olive oil for drizzling

## Dinner Rolls

*An easy upgrade to your breadbasket, these beautiful rolls have all the flavor of whole wheat, but with a soft, flaky texture. Sprinkle with sesame seeds or flaxseeds before baking for added crunch.*

In the bowl of an electric mixer fitted with the dough hook, combine the yeast and water and let stand until slightly foamy, about 5 minutes. Add the spelt and emmer blend, flour, kosher salt and olive oil and beat on medium-low speed until just incorporated. Increase the speed to medium and beat for 5 minutes, stopping the mixer occasionally to scrape down the sides of the bowl.

Transfer the dough to a large flour-dusted bowl and cover with a clean kitchen towel. Let stand at room temperature until nearly doubled in volume, about 1 hour.

Line a baking sheet with parchment paper. Transfer the dough to a lightly floured work surface, punch it down and fold it over several times. Divide the dough into 15 pieces, each about 2 oz., and shape each piece into a ball. Place the dough balls on the prepared baking sheet, cover with a kitchen towel and place in a warm spot (about 80°F) until the dough has doubled in volume and has a slightly springy texture, about 1 hour.

Preheat an oven to 400°F.

Remove the kitchen towel, brush the tops of the rolls with water and sprinkle lightly with fleur de sel. Bake until the bottom edges are lightly golden, about 10 minutes. Makes 15 rolls.

Recipe Courtesy of Dan Barber, Blue Hill.

2½ tsp. active dry yeast  
 1½ cups water, at room temperature  
 2¼ cups finely ground spelt and emmer blend  
 1¾ cups all-purpose flour, plus more for dusting  
 1 Tbs. plus ½ tsp. kosher salt  
 ¼ cup olive oil  
 Fleur de sel for sprinkling

## Grains Primer

**Q:** How are milled specialty grains different from the grains you buy at the store?

**A:** Like other ingredients, flour is at its most flavorful when it is freshest. Milling grains at home ensures the best, most intense and aromatic flour, adding distinctive sweetness to baked goods. Additionally, milling your own flour allows you to experiment with grains beyond the wheat flour you find in grocery stores, contributing new layers and dimensions of flavor to old recipes.

**Q:** How long will the grains remain fresh after they have been ground into flour?

**A:** The flours can be left at room temperature for two to three days before they will start to spoil. They will keep in the refrigerator for up to 10 days and in the freezer for up to 30 days.

**Q:** How should the grains and flours be stored?

**A:** Store fresh whole-grain flours in tightly sealed containers in a cool, dark place, such as a pantry, refrigerator or freezer (see above). They will become rancid more quickly than regular all-purpose flours, so always smell or taste them before using. If they smell musty or taste bitter, do not use them.

**Q:** How do different grains affect the taste and texture of baked goods?

**A:** Whole-grain flours lend a pleasantly chewy quality to baked goods such as cookies, cakes and breads—not too dry or dense. The flavor will vary depending on which grains you work with, as they all have different characteristics. However, with most grains, you can count on a sweeter, slightly nutty, earthy and toasty profile—a flavor that is much more intense and aromatic than that of shelf-stable flours.

**Q:** What are the best ways to cook heirloom grains, and how should you start?

**A:** Most grains are simple to cook: simply bring them to a boil in water, cover and simmer until tender with a slight bite. Cooking times vary for each grain, so plan accordingly. Prepared this way, the grains may be added to salads, soups and stews or enjoyed as a side dish. Individual recipes will provide instructions for cooking grains into a risotto or pilaf, or even into a sweet, creamy breakfast or dessert dish. Whole-grain flours can be substituted for all-purpose flour in recipes for baked goods for enhanced flavor and texture.

<p>2 cups finely ground Wapsie Valley corn</p> <p>¼ cup plus 1 Tbs. cornstarch</p> <p>2 tsp. baking powder</p> <p>½ tsp. kosher salt</p> <p>1½ cups milk</p> <p>1½ Tbs. vanilla extract</p> <p>¼ cup canola oil</p> <p>2 eggs, separated</p> <p>1½ Tbs. sugar</p> <p>Melted unsalted butter for brushing griddle</p>	<h3>Wapsie Valley Corn Pancakes</h3> <p><i>These versatile pancakes are just as good savory as they are sweet. At breakfast, serve with fresh berries and syrup; for dinner, top with smoked fish, grilled lobster or fresh corn salad. Because the dried corn kernels used in this recipe are rather large and hard, you will need to grind them twice. Grind them on the medium setting of your grain mill, then pass them through a second time on the fine setting.</i></p> <p>In a small bowl, whisk together the ground corn, cornstarch, baking powder and salt.</p> <p>In a large bowl, whisk together the milk, vanilla, canola oil and egg yolks. While whisking, slowly add the ground corn mixture, whisking well to prevent lumps from forming. Let the batter rest for 30 minutes.</p> <p>Put the egg whites in a medium bowl. Using an electric hand mixer, beat the whites on medium-low speed until foamy, about 30 seconds. Gradually add the sugar, increase the speed to medium-high and beat until stiff peaks form, about 2 minutes more. Using a rubber spatula, gently fold half of the whites into the batter until just incorporated, then fold in the remaining whites until incorporated.</p> <p>Preheat a griddle or a nonstick sauté pan over medium heat. When the griddle is hot, brush with butter.</p> <p>Pour about ⅓ cup of the batter onto the griddle for each pancake. Cook until bubbles form on top and the batter is set, 2 to 3 minutes. Flip the pancakes and cook until golden brown on the other side, 2 to 3 minutes more. Keep warm until all the pancakes are cooked. Repeat with the remaining batter, brushing the griddle with more butter as needed. Makes about twelve 5-inch pancakes.</p> <p>Recipe Courtesy of Dan Barber, Blue Hill.</p>
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<p>3 cups finely ground Wapsie Valley corn</p> <p>3½ cups all-purpose flour</p> <p>1 tsp. baking soda</p> <p>2 tsp. baking powder</p> <p>2 tsp. table salt</p> <p>32 Tbs. (4 sticks) unsalted butter, at room temperature</p> <p>2 cups sugar</p> <p>2 eggs</p> <p>2 tsp. vanilla extract</p>	<h3>Wapsie Valley Corn Cookies</h3> <p><i>The simplicity of these cookies makes them a perfect showcase for the flavor of Wapsie Valley corn. Because the dried corn kernels used in this recipe are rather large and hard, you will need to grind them twice. Grind them on the medium setting of your grain mill, then pass them through a second time on the fine setting.</i></p> <p>In a bowl, whisk together the ground corn, flour, baking soda, baking powder and salt until combined; set aside.</p> <p>In the bowl of an electric mixer fitted with the flat beater, beat together the butter and sugar on medium speed until creamed and fluffy, about 2 minutes, stopping the mixer occasionally to scrape down the sides of the bowl. Add the eggs and vanilla and beat on medium-low speed until combined, about 1 minute.</p> <p>Reduce the speed to low, add the ground corn mixture and beat until just incorporated, stopping the mixer to scrape down the sides of the bowl as needed. Remove the bowl from the mixer, cover the bowl with plastic wrap and refrigerate for 1 hour.</p> <p>Position 1 rack in the upper third and 1 rack in the lower third of an oven. Preheat the oven to 325°F. Line 2 baking sheets with parchment paper.</p> <p>Scoop out the dough with a 3-Tbs. cookie scoop and stagger the cookies on the prepared baking sheets, 8 cookies per sheet. Bake until the cookies are lightly golden and just set in the middle, 15 to 17 minutes, rotating the baking sheets from top to bottom and 180 degrees halfway through baking.</p> <p>Let the cookies cool for 5 minutes on the baking sheets, then transfer the cookies to a wire rack. Repeat with the remaining cookie dough. Makes 32 cookies.</p> <p>Recipe Courtesy of Dan Barber, Blue Hill.</p>
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<p>3 cups milk or chicken stock</p> <p>1½ cups water</p> <p>1 bay leaf</p> <p>Kosher salt and freshly ground pepper, to taste</p> <p>2 Tbs. unsalted butter</p> <p>1 small yellow onion, finely diced</p> <p>1½ cups coarsely ground spelt and emmer blend</p> <p>¾ cup finely grated Parmigiano-Reggiano cheese</p>	<h3>Creamy “Risotto”</h3> <p><i>Coarsely cracked spelt and emmer blend, ground on the medium-coarse setting of a grain mill, mimics traditional risotto in this comforting dish.</i></p> <p>In a small saucepan over medium-high heat, combine the milk and water and bring to a simmer. Add the bay leaf and season with salt and pepper. Reduce the heat to low and keep the milk mixture warm.</p> <p>In a large saucepan over medium heat, melt the butter. Add the onion and cook, stirring occasionally, until tender and translucent, 6 to 8 minutes. Add the spelt and emmer blend and cook, stirring frequently, until the grains are toasted, 1 to 2 minutes. Add half of the milk mixture and cook, stirring frequently, until most of the liquid has been absorbed, about 10 minutes. Add the remaining milk mixture and cook, stirring frequently, until the mixture is creamy and most of the liquid has been absorbed, about 10 minutes more.</p> <p>Remove from the heat and stir in the cheese. Discard the bay leaf and adjust the seasoning with salt and pepper. Spoon the risotto into bowls and serve immediately. Serves 4.</p> <p>Recipe Courtesy of Dan Barber, Blue Hill.</p>
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