

# FLOUR: GRAINS OF THE GODS

By SUSIE NORRIS

Bread and chocolate are connected not just through the classic pastry *pain au chocolat*,

but through the many gods and goddesses of ancient cultures who watch over them. Chocolate is known as "the food of the gods" because its Latin name, *theobroma cacao*, refers to the practice of Aztecs kings and noblemen who used chocolate to honor their gods of creation (specifically, a feathered serpent named Quetzalcoatl). Unlike chocolate, which was reserved for royalty, early bread was made from the fruit of wild grains and became the food of the common people. It dates back to prehistoric nomads. Most accounts credit the Egyptians with advancing bread making by refining culinary techniques and relying on cultivated grains. Later, in Rome, bread was made from grass seeds farmed, harvested, milled and baked under the nurturing eyes of their powerful and beloved goddess, Ceres. Today, her legacy lives on as the most popular grains—wheat, rice, corn, rye, barley and oats are the cereal grains (from "Ceres") which feed more people than any other food source on earth.

Nutritious seeds in the stalks, such as the wheat berry or the corn kernel, distinguish cereal grains. Flour, in the many forms we know it today – all-purpose flour, bread flour, whole wheat flour, cake flour, oat flour, rye flour, cornmeal – is milled from the grain. The nutrients and complexity of these seeds and the resulting flours create myriad products, from French baguettes to birthday cakes; multi-grain sourdough batards to cornbread; Cocoa Puffs to chocolate soufflés.

Today's pastry chefs are blessed with bags of flour designed specifically for the purpose of their final product. Bread flour, made from hard red wheat typically grown in the "wheat belt" of the central United States, provides the protein and structure necessary for bread loaves. Cake flour, made from soft red wheat and often found in Europe, is finely milled and whitened, which provides the soft, springy crumb of delicate cakes.

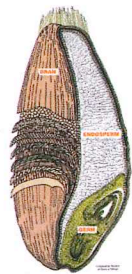


## GODS AND GODDESSES OF THE AGRICULTURE

Ceres (Demeter in Greek)  
Quetzalcoatl  
Saturn (Kronus in Greek)

## WHAT'S IN A WHEAT BERRY?

A "wheat berry," the kernel of the wheatstalk, is made up of three parts: the bran, the endosperm and the germ. Of these, the germ is packed with the most nutrients and also the oil from the seed. Store these in the freezer to keep the oil from going rancid.



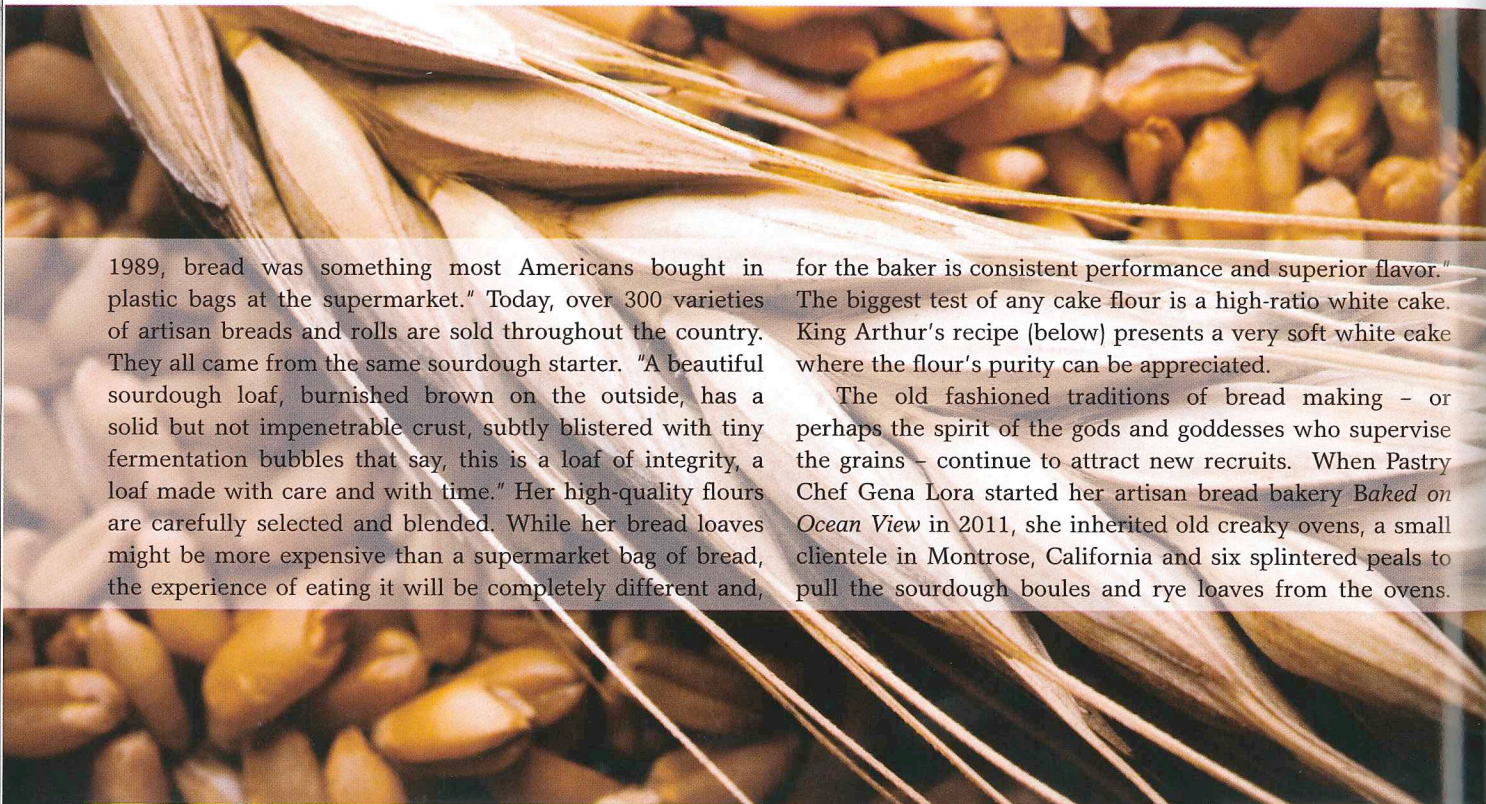
Pastry flour, also made from soft red wheat, is designed to produce a tender product, but is less processed than cake flour. In industrial kitchens, pastry chefs grab the right bag for the job. Restaurant chefs and home cooks often rely on all-purpose flour, suitable for pie dough, Danishes or any items that ride the balance beam of tender crust and significant structure. In artisan bakeries, however, the flour choices expand dramatically: rye and pumpernickel flours are mixed with bread flour for a hearty, brown loaf; whole wheat flour is mixed with golden flaxseed flour and seven others for a nine-grain loaf; durum flour supplies the right texture for handmade pasta. The increase in options can create an increase in confusion: who supplies the best flours for artisan baking? Is there a price difference? And when is the highest quality really necessary for a simple loaf of bread or a cake for a children's birthday party?

Nancy Silverton is something of a bread goddess, lauded for her Los Angeles bakery filled with crusty, flour-dusted, hand-shaped breads. "When I opened La Brea Bakery in

in a word, exceptional.

Mass-produced bread in the modern age, wonderful in a Wonder Bread way, has always had detractors. With industrialization, bread became available to cheaply feed millions of people. But with industrialization came chemicals. Commercial flours are often bleached or "bromated" so they achieve a whiter color and are able to absorb water more efficiently, which creates a white, easy-to-mix, and uniform dough. The processes that make them comfortingly and reliably squishy also make them nutritionally void and flavorless. Artisan bakers prefer less processed flours with high levels of protein, no bleach and no chemicals.

According to Susan Reid, Editor of *The Baking Sheet* from King Arthur Flour in Vermont, her company was founded in 1790 to avoid flour that was adulterated with substances like ground chalk and bone, a common practice back in colonial times. Purity is still primary for King Arthur Flour. "We mill our all-purpose flour to 11.7% protein. Most supermarket flours are in the neighborhood of 10.5%. What that means



1989, bread was something most Americans bought in plastic bags at the supermarket." Today, over 300 varieties of artisan breads and rolls are sold throughout the country. They all came from the same sourdough starter. "A beautiful sourdough loaf, burnished brown on the outside, has a solid but not impenetrable crust, subtly blistered with tiny fermentation bubbles that say, this is a loaf of integrity, a loaf made with care and with time." Her high-quality flours are carefully selected and blended. While her bread loaves might be more expensive than a supermarket bag of bread, the experience of eating it will be completely different and,

for the baker is consistent performance and superior flavor." The biggest test of any cake flour is a high-ratio white cake. King Arthur's recipe (below) presents a very soft white cake where the flour's purity can be appreciated.

The old fashioned traditions of bread making - or perhaps the spirit of the gods and goddesses who supervise the grains - continue to attract new recruits. When Pastry Chef Gena Lora started her artisan bread bakery *Baked on Ocean View* in 2011, she inherited old creaky ovens, a small clientele in Montrose, California and six splintered peals to pull the sourdough boules and rye loaves from the ovens.

#### HOW TO MAKE A STARTER

A starter is a type of fermented yeast and flour paste also known as a "preferment". It adds flavor and leavening power to artisan breads, particularly sourdough breads, and helps them keep fresh longer. Many types of starters exist, from the thin "poolish" to the heartier "biga". Here's a simple approach to the "poolish": Measure equal parts water (8 ounces) and bread flour (8 ounces), plus about a tablespoon of fresh yeast (1/2 ounce) OR 1 teaspoon of the more readily available dry active yeast. Mix the yeast with the room temperature water, check for bubbling activity which signifies that the yeast is alive, then slowly stir in the bread flour. Allow it to rest at room temperature for about 8 hours. Use in bread recipes that call for a "culture" or "starter". Technically, sourdough starter comes from wild yeast, not commercial yeast, but many bakers work with commercial fresh yeast (also known as "compressed", "cake" or "baker's" yeast) with good results.

After teaching culinary students how to make bread for 10 years, Gena was ready to expand her artisan repertoire. "I look for the small adjustments in starters and fermentation time that make big differences in flavor, and I sometimes add soakers or sunflower seeds to give a loaf more character," she says. Here, her go-to Sourdough Boule has a sharp acidity and a beautiful open crumb.

The Lord' Prayer contains, unforgettably, these words: "Give us this day our daily bread," in which bread symbolizes all that is necessary to a good life. While the concept of daily bread may change with culture and over time, its significance, indeed its "godliness", is in the grain.

#### WHAT'S A SOAKER?

A "soaker" refers to hydrated wheat berries suitable for inclusion in baked bread. When wheat berries (or "kernels") are cracked then hydrated, they are known as "bulgur".

## Pain au Chocolat from Chef Susie Norris

24 oz/680 g bread flour  
1 Tbs kosher salt  
10 oz/283 g unsalted butter, cubed and chilled  
10 oz/283 g whole milk  
1 oz/ 28 g fresh cake yeast or 1 Tbs active dry yeast  
2 oz/57 g light brown sugar, lightly packed  
32 bittersweet chocolate batons or 8 oz/227 g bittersweet chocolate, coarsely chopped  
1 egg, scrambled, for egg wash

1. Sift the bread flour and kosher salt together onto a piece of parchment paper or foil and set aside.
2. Put the cubed butter in the bowl of an electric mixer fitted with the paddle attachment and mix on low until the butter has softened (about 1 minute.) Scrape the softened butter onto a fresh piece of parchment paper or plastic wrap and smooth over with a large spatula until the butter is a large, thin square (about 1 inch thick and about 9" square). Wrap the butter block in plastic wrap and chill in the refrigerator for about 30 minutes.
3. Rinse the bowl of the electric mixer and change to the dough hook attachment. Put the milk, yeast and brown sugar into the bowl and mix on low for about 1 minute. Stop the mixer and slowly add about 1/3 of the bread flour, then continue mixing until the dough is smooth. Repeat until all the flour is incorporated. Continue mixing about 7 minutes. The dough should be soft, but not too sticky. Turn the dough out onto a lightly floured work surface and knead for a few minutes. Using a rolling pin, flatten the dough into approximately a 10" x 16" rectangle, about 1/2" thick. Make sure the corners of the dough are sharp and the dough has an even thickness throughout. Wrap it in plastic and chill in the refrigerator for about 20 minutes.
4. Remove both the butter block and dough rectangle from the refrigerator and unwrap them. Place the chilled butter block on top of the chilled dough rectangle. It should be flush with the top of the rectangle, leaving a portion of dough uncovered below. Fold the uncovered bottom edge of the dough up, just beyond the middle of the dough, and then the top edge down to the bottom edge, as you would a business letter. This is the "lock-in" phase, and the butter block is now locked into the dough. Flatten the rectangle by rolling the dough to about 1/2" thick. If any butter oozes out, sprinkle a little flour on it to prevent it from sticking. Repeat the letter fold again (bottom edge up toward the center, then the top edge folded down), then flatten the dough into a rectangle

#### BREAD BAKING BLOGS

The Fresh Loaf ([www.thefreshloaf.com/blog](http://www.thefreshloaf.com/blog))  
Wild Yeast ([www.wildyeastblog.com](http://www.wildyeastblog.com))  
Fresh from the oven (<http://freshoven.blogspot.com>)  
Bakery Bits (<http://blog.bakerybits.co.uk/>)  
Reciplace (<http://www.reciplace.co.uk/reciplace/bread>)  
Bread Basket Cast (<http://breadbasketcase.blogspot.com/>)

again. This process is called a "turn." Wrap the dough in plastic and refrigerate for 30 minutes. Repeat the letter fold process or "turn" 3 more times, flattening and chilling the dough for 30 minutes between each turn. After the final turn, wrap the dough tightly in plastic and chill for at least 1 hour, but no longer than overnight.

5. Preheat the oven to 350°F. Once the dough is thoroughly chilled, roll it to about 1/2" thick. Use a paring knife or pastry wheel, cut out 4" squares. Flatten each square a little more with a rolling pin, then brush each one with egg wash. Place 2 chocolate batons or about 1 1/2 Tbs of chopped chocolate on the bottom edge of each square. Roll the dough up tightly around the chocolate and let the pastry rest with the seam at the bottom. Place each pastry on a sheet pan lined with parchment paper or tin foil. Repeat for all the squares. Brush the top and sides of each pastry with egg wash, then allow them to proof in a warm spot (on top of the stove in a warm kitchen should work.) Brush them with another coat of egg wash, then bake them for about 20 minutes, until the entire pastry is golden brown.

## Gena Lora's Sourdough Boule from Baked on Ocean View

27 oz/775 g bread flour  
6.5 oz/180 g rye flour  
18 oz/560 g water  
16.5 oz/480 g 100% hydrated starter such as "poolish"\*  
0.75 oz/24 g salt

\*Note: See recipe for starter in the sidebar "How to Make a Starter."

1. Sift the bread flour and the rye flour together onto a piece of parchment paper and set aside. In a large bowl, mix together the water and hydrated starter. Add in 1/3 of the flour mixture and mix with a non-stick spatula or wooden spoon. Allow the mixture to rest for a few minutes, then fold in the rest of the flour. Mix until it becomes a rough dough. Turn the dough out onto a lightly floured work surface and knead for several minutes (at least 5; no more than 10). The dough should have some elasticity and not be very sticky. Place in a clean bowl, cover it with plastic wrap, and put it in a warm spot. Allow the dough to double in size (at least 1 hour).
2. Return the dough to the work surface, and shape it into a round ball shape. Place the ball (or boule in French) on a sheet pan lined with a piece of parchment paper, place in a proof box or in a warm spot and allow to double in size again. Bake the boule at 400°F for about 35 minutes, or until it turns a medium brown color. Allow to cool.

## White Cake from King Arthur Flour

Yield: Two 8" or 9" round layers; one 9" x 13" x 2" sheet cake, or 20 to 24 cupcakes

22 oz/624 g King Arthur Unbleached Cake Flour Blend  
 14 oz/397 g granulated sugar (superfine sugar is best)  
 1 Tbs baking powder  
 3/4 tsp salt  
 6 oz/170 g unsalted butter, softened  
 4 large egg whites  
 1 large egg  
 8 oz/227 g full-fat vanilla yogurt or 1 cup whole milk  
 2 tsp vanilla extract  
 1 tsp almond extract

1. Preheat the oven to 350°F. Prepare two 8" x 2" or 9" x 2" round pans; a 9" x 13" pan; or 2 standard cupcake pans (20 to 24 cupcakes) by greasing and flouring; or lining with parchment, then greasing the parchment. Note: Make sure your 8" round pans are at least 2" deep; if they're not, use one of the other pan options.
2. Mix all of the dry ingredients on slow speed to blend. Add the soft butter and mix until evenly crumbly, like fine damp sand. It may form a paste, depending on the temperature of the butter, how much it's mixed, and granulation of the sugar used.
3. Add the egg whites one at a time, then the whole egg, beating well after each addition to begin building the structure of the cake. Scrape down the sides and bottom of the bowl after each addition.

4. In a small bowl, whisk the yogurt (or milk) with the vanilla and almond extracts. Add this mixture, 1/3 at a time, to the batter. Beat 1 to 2 minutes after each addition, until fluffy. Be sure to scrape down the sides and bottom of the bowl.
5. Pour the batter into the prepared pans. Bake for 25 to 35 minutes for 8" or 9" rounds; 36 to 42 minutes for a 9" x 13" x 2" sheet cake; or 18 to 20 minutes for cupcakes. A toothpick or cake tester inserted into the center will come out clean when done. Remove from the oven, remove from the pan, if desired (not advisable for a 9" x 13" sheet cake), cool on a rack, and ice.

### GOOD BOOKS ON BREAD & PASTRIES

Beranbaum, Rose Levy. *The Bread Bible*.  
 New York: W. W. Norton & Company, 2003

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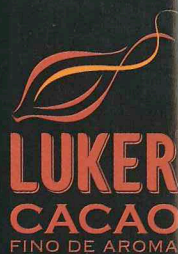
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