

Baking Wood-Fired Breads with Forno Bravo



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Forno Bravo
Authentic Italian Wood-Fired Ovens

Table of Contents

Chapter 1. Baking Bread as Good as Your Pizza.....	3
Freshness Counts.....	3
Chapter 2. Equipment, Technique, Temperature, and Time.....	5
The Gear.....	5
By weight, not volume.....	7
Techniques.....	8
Temperatures.....	10
Times.....	10
Humidity.....	11
Chapter 3. Steam and Good Bread Baking.....	12
Chapter 4. Wood-Fired Breads.....	14
Biga Whole Wheat Bread*.....	14
Biga.....	14
Dough.....	15
Forming.....	15
Baking.....	16
No-Knead Bread.....	17
Dough.....	17
Forming.....	18
Baking.....	18
Parisian Baguette*.....	20
Day One, Pâte Fermentée (16 oz.).....	20
Day Two, Dough.....	21
Forming.....	21
Baking.....	21
Variations.....	22
Kaiser Rolls*.....	23
Day One, Pâte Fermentée (16 oz.).....	23
Day Two, Dough.....	24
Forming.....	24
Baking.....	25
Ciabatta.....	26
Day One, Biga.....	26
Day Two, Dough.....	26
Forming.....	26
Baking.....	27
Boule au Levain*.....	28
Day One, Dough.....	28
Forming.....	29
Day Two, Baking.....	29
Chapter 5. Books and Resources.....	31
Resources.....	31
About the Authors.....	33
Jim Wills.....	33
James Bairey.....	33

Chapter 1. Baking Bread as Good as Your Pizza

Now that you've made the best pizza in your oven, you probably want to learn how to bake the best bread, too. You can and you will. Even recipes written specifically for kitchen ovens can be adapted to your wood-fired oven. They can be doubled, or tripled, as well, so you can take advantage of the size of your hearth.



Shown here is a Pain à l'ancienne baguette. High heat wood firing has resulted in a loaf with tremendous volume and nearly perfect caramelization. The loaf was docked, or slashed, with kitchen shears. On a 550° hearth, this bread took twelve minutes to reach an internal temperature of 205°.

Wood-fired loaves are significantly better than those made in home kitchen ovens or in gas-fired bakery ovens for the same reasons that your pizzas are so much better. The retained, radiant heat of a wood-fired oven will give your breads exceptional oven spring for increased loaf volume, plus extraordinary crumb and crust development and caramelization. Better yet, they bake much faster. Chemistry plays a large role in any baking, and you'll find that wood-fired breads have a significantly longer shelf life than commercial breads, perhaps, strangely enough, because they use no additives or enhancers. Wood-fired breads also freeze very well.

Pizza ovens differ somewhat in shape and configuration from dedicated wood-fired bread ovens, but that does not mean you won't be able to bake the most exceptional bread you have ever had outside Europe, or from a master artisan bread baker.

Bear in mind that pizzas are baked with a fire burning off to the side of the hearth. For bread baking, by contrast, the oven is heated, the ash and coals are raked out, the hearth is brushed and cleaned, and then the breads are baked with a door in place to seal in the heat. It is the retained heat that does the work, and it's a perfect way to take advantage of the heat you've already amassed from your pizza making.

For multiple loaf baking, you can increase the mass (the heat retaining ability) of your pizza oven by adding a layer of tiles or fire bricks on top of your cooking floor before you light your fire.

Bread baking, like pizza making, takes practice. The sections that follow will help you through the steps toward superior bread, but they can't take the place of hands-on experience. The most exciting part of learning how is that your breads will keep on getting better and better.

When you're just starting, it is probably best to follow the recipes here as closely as you can. Even small departures in technique or ingredients, or substitutions, can make very large changes to the finished breads. Later, when your confidence has increased, you'll have the background to experiment.

Freshness Counts

You wouldn't want to use anything but the freshest ingredients for your pizza creations. The same goes for bread. Fresh flour, except for whole wheat and rye, should have little to no odor. If it does, it's gone rancid. Wheat and rye flours are best purchased in small amounts, because they do

not last as long as bread or all-purpose flours. Bleached flours of any kind are not recommended here; they will give you very white bread, but much less taste. If possible, store flours in sealed, air-tight containers, in a dark, cool spot.

It's odd that the flours found on supermarket shelves ordinarily do not show a "best before" date. This might mean that one bag of flour is a month old, another a year old. Try to purchase your flours from dealers with a high turnover rate, or patronize a specialty grain supplier. Organic flours, by their very nature, are best used quickly. There are many very good flours available, although for bread the single most reliable brand in the United States is King Arthur. Avoid "best for bread" formulations from other mills. Unless otherwise specified, you want to use hard, unbleached bread flour (preferably stone ground) for the recipes given here.

Commercial yeasts, either instant dry (IDY) or active dry (ADY), also have a finite shelf life. Here, SAF Gold instant yeast is recommended, because of its dependability and performance. Fleischman's Active Dry Yeast is quite good for most applications that call for this type. Do yourself a favor and buy your yeasts in the larger, vacuum sealed bags, because the price of yeast in smaller foil packets or glass jars is exorbitant. Once opened, transfer the yeasts to airtight containers and store in the freezer. Without using a conversion chart, IDY and ADY are not interchangeable in any of the following recipes.

Yeast, either commercial or wild, does not like chlorine, but seems to favor minerals, so don't use chlorinated tap water. Your water should be bottled (no salt added) or filtered to remove chlorine, but mineral rich spring water is probably best if you have a source. Distilled water does not work as well as these three. Getting your water up to proper temperature is best done in a microwave. Usually, the water temperature should be between 90 and 100° F in order to activate commercial yeast. If you're using a wild yeast starter (called a sourdough in North America, a *levain* in France), water temperature is normally much cooler, in the 70° range. Managing the temperature of all your ingredients is one of the most important and most often overlooked keys to consistently successful bread.

Bread dough is made from just four fundamental ingredients: flour, water, yeast in some form or another, and salt. Table or iodized salt might be fine on broccoli, but the flavor of good sea salt cannot be beaten for bread. There are many, many types of sea salt available, but the grey, sun-dried sea salt from the Brittany coast of France imparts the best flavor.

These are a few basics. The next section will introduce you to the specifics of making sensational bread in your pizza oven.

Chapter 2. Equipment, Technique, Temperature, and Time



The Gear

Bread bakeries, whether large or small, require a certain amount of equipment to operate efficiently. You certainly don't require as much, but there are a few things you will need to move from pizza making to bread baking in your Forno Bravo oven. The section on Books and Resources will guide you to suppliers for many of the things mentioned here.

If you're baking pizzas already, it is likely that you have a point-and-shoot infrared thermometer. If not, you will probably need one, or at least an air temperature thermometer that reads up to, or above, 600° F. To accurately judge when your ingredients and your finished loaves are at the proper temperature, you will need a probe-type instant read thermometer. These vary enormously in the speed at which they register and recover, and consequently in price, but you will be able to find a fairly good digital model at your local hardware or kitchen supply store for about \$15. The English company Thermopen makes the most advanced version. It is very fast and highly recommended.



Investing in a high quality thermometer will pay for itself many times over. Photo by Patrick Farina.

To make round hearth loaves, you will need several wicker baskets of the same size and shape as the baskets used to serve rolls at your local restaurant. Each one should be equipped with a piece of linen fabric, such as an old napkin, to line the inside. Traditionally, coiled rush baskets called *banneton* are used for rising, but these can be fairly expensive (see Chapter 5. Books and Resources).



On the left are bread baskets from a dollar store, one lined with an old linen napkin. On the right are coiled rush banneton (see Chapter 5). The nylon brush in the foreground is from the same dollar store; it's used to brush excess flour from the rush baskets after use.

Some breads require pans, such as the Biga Wheat Bread we will begin with shortly. Where needed, sizes will be listed. The exact size is important, because if the pan is too large, the dough will not rise properly; too small, it will spill over the sides. Most other things, like sheet or cookie pans, and parchment paper, you probably already have. Your wooden and metal pizza peel will do nicely for most breads.

One fairly specialized piece of equipment you might need if you want to venture into French *baguette* or *bâtard* (torpedo) shaped loaves is what French bakers call a *couche*. Actually, it's just a large piece of heavy linen that you can probably get at your local fabric supplier. While you can buy perforated metal baguette and Italian torpedo pans, as you will be baking directly on the hearth floor we do not recommend them.

The folds of the couche act as walls, so the baguette dough rises upwards, rather than spreading outwards.



We're assuming that you already have a stand mixer for your pizza doughs. The recipes that follow are presented for those who do. If you don't, you can still knead by hand, but you'll have to add about four or five more minutes of kneading time to the one given. Bear in mind that orbital dough hook mixers, such as a Kitchen Aid, have a fairly high friction factor, especially when kneading bread dough. Friction produces heat, and, as we'll see in a minute, you must keep the temperature of the dough within fairly strict limits.

By weight, not volume

The single most important piece of equipment you need to guarantee consistent baking results is a digital kitchen scale. Measuring cups do vary, and one cup of flour scooped out of the bag by one person will not be the same as that scooped by another. Flour density varies by mill, too, so it is vital that your flour and water are weighed accurately. A cup of flour weighs 4.5 ounces, period; water, 8 oz. For home baking, it is impractical to weigh very small amounts, ½ teaspoon for example, so these amounts are given by volume here. Like instant read thermometers, scales can be either reasonable or expensive, depending on display speed and the upper limits they can weigh. Be certain to buy one you can "tare," that is set to zero, to take the weight of the container out of the equation. If you are using two types of flour in one batch, say 10 ounces of bread flour and 10 ounces of all-purpose, you can set your bowl on the scale, tare it to zero, add the first ten ounces, tare it to zero, then add the second amount. It really takes the guess work and the error prone math out of measurement. Salter scales are used at Mary G's.



Despite its size, this electronic Salter scale can weigh up to 11 pounds of flour. Arranged on it are four bread blades. The two at the bottom are curved for angled cuts on boule and baguette. The two at the top are straight blades meant for downward cuts on such things as Italian bread.

Techniques

Like pizza making, dough preparation and shaping are very tactile experiences. Getting to know the feel of properly kneaded dough takes time and patience to learn. However, understand that for most recipes fully kneaded dough should register between 77 and 81° F; slower rising sourdough breads from 75 to 78. This is one place where your instant read thermometer is indispensable. It is unwise to knead in a mixer to a temperature higher than 81, because it will affect the yeast and the rise, resulting in dense, gummy bread. If you reach that temperature range but still think the dough needs more kneading, finish it on the counter by hand.

Hearth breads rely in part on gluten structure to obtain that classic open-hole crumb in the baked loaves, because the gluten forms walls around the gas pockets created by fermentation. The best way to ensure that the gluten is fully developed is to use the “windowpane test:” pull off a golf-ball-sized piece of your kneaded dough, flatten it and stretch it out between the thumb and forefinger of both hands in front of a good light source. The dough should not tear, and there should be a dark web of gluten strands showing within the “pane.” Dough that is in the right temperature range and passes this test is ready to rise, or, more properly, ferment, because it has achieved the optimum environment for gas production from the yeast, plus flavor from lactobacilli and enzyme activity in the dough.



This is the sort of crumb, or hole structure, you are looking for in your hearth breads. The dark chunks are pieces of Kalamata olives in our Olive & Thyme Boule. The incredible oven spring that results from wood-fired baking is apparent in the pattern of the gas pockets from bottom to top.

If you do knead by hand, get ready for a workout. The dough should be pushed away from you on the counter, forcefully, with both hands. Turn it, and then push away again, three or four more times. Grab one end, twist your wrist as you take the dough up to shoulder height, and slam what was the top of the dough down on the counter. Slamming it down, after pushing it away from you, elongates the gluten strands. The same technique should be used when you finish machine kneaded dough on the counter, only nowhere near as many times. One French baker, who kneads all her baguette dough by hand, swears that 700 times is about right for good dough. Watch our [Hand Kneading Dough Video](#) to see how this is done.

Hearth baked breads, because of the temperatures involved, will burst due to oven spring. Experienced bakers manage this phenomenon by docking or slashing their breads in a decorative pattern with a *lame* or bread blade. The point of the blade is held at about a thirty-five degree angle to the surface of the dough, and then drawn across the surface to a depth of about half an inch, as shown in our [Bread Docking Video](#). This results in the signature *grigne* or grin of artisan breads. There is no need to go to the expense of buying an imported *lame* when a thin, double-edged razor blade will do just as well after it's fitted into an inexpensive blade holder. (See Chapter 5).



Here's a close-up of the grigne on an Olive & Thyme Boule. Notice the caramelization of the interior and the well developed crust. Without optimum hearth temperature and enough steam in your oven (see Section 3), you won't achieve this look. The circular pattern on the crust is caused by a coiled-rush rising baskets called a banneton.

Shaping techniques for round hearth loaves and other breads will be discussed and shown under individual recipes.

Most of the recipes listed in Chapter 3 are multi-step procedures, with time lapses between steps. It is a very good idea to follow what the French call *mis en place* from the very beginning when baking bread. All this really means is that each of your ingredients should be weighed and ready, every bowl and each piece of equipment should be laid out conveniently, **before** you begin. Quite apart from reducing stress, this method helps to eliminate such errors as, "Did I really add the salt?"

Temperatures

As a starting point, you should be loading your breads onto a hearth floor with a surface temperature of about 500–550° F; considerably lower than for pizza. It's an approximation, because ovens vary, and you'll have to be prepared to adjust to what your oven tells you, just as you did with your pizzas. It is quite possible to bake at higher temperatures for things like *baguette*, but you have to be very vigilant to pull it off without creating burnt offerings.

We've already talked about the ideal temperature for fully kneaded dough, but not directly about the temperature of fully baked bread. Unless otherwise specified, the interior of your finished hearth loaves should register at least 205° F. Tapping the bottom of the loaf is at best unpredictable. It's far better to be sure with an instant-read thermometer than to guess.

Times

The time it takes for your breads to be fully baked is another area for experimentation based on your oven's quirks and characteristics. Although suggested bake times and hearth temperatures are listed in individual recipes, the general rule of thumb is that the time listed for baking in a home oven recipe should be cut in half. At a hearth temperature of around 550°, our one kilogram (2 lb) round hearth breads take twenty-two minutes to bake to an internal temperature above 205° F, while our 500 gram (1 lb) baguette take twelve minutes to reach the same figure. This is roughly half the time it would take in a 500° home oven. Using a digital timer here is highly recommended.

Virtually any bread recipe can be adapted for wood-fired baking using this general rule.

Humidity

Humidity levels will affect the amount of water you add to your recipes and first and second rising times. If it's very humid in your kitchen, such as during a summer heat wave, you probably will have to reduce the amount of water you use by as much as 10 per cent, otherwise your dough will be very sticky and will require a lot more flour to make it manageable. Humidity in the air is one thing, but your flour will absorb humidity as well. Hot, humid weather will mean your rise times will be shortened. With the exception of No-Knead Bread, don't let your dough more than double, because it will be over-fermented and deflate the moment you try to load it into your oven. Judging when it actually has doubled can be challenging. One way to be certain is to pull off a small portion of your dough and put it in a straight walled, oiled glass beaker. Mark the level with tape if the beaker is not graduated, then mark it again at the doubling point. There are also graduated plastic tubs made for this purpose (see Chapter 5).

Low humidity is another problem, and it will slow down your rising times. In winter, if the air in your kitchen is very dry, you might want to set a large pot of water on your stove and leave it just at the simmer while your dough is rising.

A simple, and cheap, analog humidity gauge can be had at most hardware stores, so you'll have a rough idea of what the level actually is, then take steps accordingly.

For most breads, the optimum air temperature during the first and second rising is about 72–75°. This isn't always possible to maintain, though. Lower is fine; the dough will simply take longer to double. A lot higher is not, because the dough will rise much too quickly, resulting in bread with a yeasty flavor.

Chapter 3. Steam and Good Bread Baking

Without steam in your oven, your rustic hearth breads will never have the appearance, volume and crust you want.

Commercial wood-fired bakeries in Europe commonly have steam injection systems to manage the look of their breads and ensure proper crust development and carmelization. This type of system is out of reach for home bakers, and even for micro-bakeries like Mary G's. However, that does not mean we can't get good results with much simpler methods.

When our 4' x 3' hearth is fully loaded with breads, the dough itself creates a fair bit of steam as it bakes, but it's usually still not enough.

Here's the procedure we follow. It has proven both successful and consistent.

First, all ash and coals are raked out of the oven. When the optimum hearth temperature is very close, we brush the hearth clean, swab it very quickly with a *damp* (not wet) piece of towel attached to a handle to remove residual ash, and then seal the door. About ten minutes before the breads are loaded, we give the interior a ten second spray from a dedicated garden sprayer with a brass wand, reaching in with the wand to the back of the hearth, then moving forward toward the mouth of the oven. The door is resealed. Depending on the size of your oven, you may not need something as large as a garden sprayer, and a plastic spray bottle might be sufficient. Be sure to wear oven gloves that reach up your forearms when you do this. There should be visible steam in the chamber.

It's often said that injecting steam into a brick or modular oven will cause bricks to crack or cast refractory pieces to shatter. In point of fact, the water never touches the interior surfaces; it immediately bursts into steam in the superheated air. If there were such risks involved, it's very unlikely that large European bakeries would use the technique.

Once you have loaded your breads into the oven, add more steam with another ten-second spray. Don't spray the breads directly. Instead, point the nozzle above them, about halfway between them and the dome. Seal the door as tight as you can. If you have trouble getting a good seal, lean a brick against the door.

Steam keeps the surface of the breads moist for the first crucial few minutes of baking. Moisture allows the heat from the hearth to drive the gasses upwards inside the dough, expanding the loaf to create tremendous volume through "oven spring." Once the steam dissipates, the crust sets, carmelization of the sugars in the grain starts and the formation of a characteristically chewy crust begins. After experimentation, you might find that another quick spray, about five minutes into your baking time, improves the results. Conversely, for hearth breads, you want them to finish baking in a dry environment, so crack the oven door open slightly during the last few minutes or so to finish the crust.

It's a difficult rule to follow, but all breads should be allowed to cool completely on wire racks before slicing. If you don't wait, the flavor will not be fully developed.



Multi-grain breads made with a wheat sourdough starter do not rise as high as loaves made entirely with hard, unbleached bread flour and a white levain. However, the loaf volume shown in this example would not be nearly as great without the oven spring produced by steam in the baking chamber.

Chapter 4. Wood-Fired Breads

We're going to start simple, because the methods described in our first recipe will be used repeatedly in more complex later formulas, and there is no advantage in beginning with a daunting procedure that will have you heading to the supermarket instead.



The finished hearth-baked loaves. Note the soft, rather dry crumb that is characteristic of good whole wheat bread.

*Biga Whole Wheat Bread**

(Makes 2 8x4 inch loaves)

Many people have problems baking wheat breads, producing loaves that are heavy and dense. This has a lot to do with the nature of whole-wheat flour, because it is relatively low in gluten compared to bread flour. The solution here is to use what bakers call a preferment, or a bit of a boost to get that whole wheat flour really moving, plus adding a percentage of hard, unbleached bread flour and vital wheat gluten. This is pretty well a foolproof recipe, and, even if you've never baked bread before, you'll be pleasantly surprised at your initial success.

Biga

8 oz. whole milk
8 oz. filtered or bottled (no salt added) or spring water
¼ oz (1Tbsp.p.) light brown sugar
4 ½ tsp. active dry yeast (ADY)
4 ½ oz. whole wheat flour

Stir the milk and water together in an 8 cup bowl. Heat in the microwave until the liquid reaches 90–100° F. Stir in sugar until it dissolves. Sprinkle yeast over the top. Once the yeast softens (about 1 minute), stir it in. Add the whole wheat flour and stir until completely hydrated. Cover the bowl with plastic wrap and set in a warm place to ferment. Depending on the warmth of your kitchen, the mixture will rise up then start to collapse within about 1 ½ hours. When it begins to collapse, it's ready to use.

While the *Biga* is rising, begin your *mis-en-place* for the next steps: weigh out your ingredients into suitable prep bowls, spread out your equipment out ready to go.



This Biga has just fallen, as you can see by the separation line from the container on the outside edge. It's ready to use.

Dough

9 oz. whole wheat flour
9 oz. hard, unbleached bread flour
2 oz. softened butter
1 $\frac{3}{4}$ oz. brown sugar (or less if you prefer)
2 Tbsp. vital wheat gluten (available at health food stores or specialty markets)
2 tsp. sea salt

Combine the *Biga*, butter and sugar in the bowl of your mixer with the paddle attachment at speed one for about thirty seconds. Add the flours and the gluten, switch to the dough hook, and mix until everything comes together in a rough ball. Add the salt at this stage. Knead for four minutes on speed two. Turn off the machine. The dough should be tacky, but not sticky. If it's very sticky, briefly knead in more flour. If it's too stiff and dry, dribble in a bit more water with the machine running. Switch off the machine, and take the dough's temperature. Remember that your range is 77–81° F. If you are on the low end, continue kneading for another minute or two. If on the high end, turn the dough out onto a lightly floured counter and knead by hand until the dough passes the windowpane test described in Chapter 2.

Mist a large bowl with cooking spray. Form the dough into a ball. Turn it into the bowl and roll it around to coat with the oil. Cover the bowl tightly with plastic wrap. Set in a warm place for bulk fermentation. The dough should double in size in 1 $\frac{1}{2}$ to 2 hours, depending on the warmth of your kitchen. In summer, 1 $\frac{1}{2}$ will be enough; 2 hours during a cold winter. It's ready if you poke the top of the dough with your finger and the indentation stays.

Forming

Turn the dough out onto an unfloured counter and lightly press it flat to degas the dough. Cover with a towel and let rest for five minutes while you prepare two 8x4 inch loaf pans by misting the interiors with spray oil. Using a dough knife, divide the dough into two equal pieces by weight. Pat each piece into an even sided rectangle about 5 inches wide and 6 to 8 inches long. Working from the 5 inch side, roll up the length of the dough, a section at a time, pinching the seam closed with your fingers at each rotation. As you roll up the dough, it will begin to lengthen. Pinch the final seam closed with the edge of your hand. Rock the loaf with the palms of both hands to even it out.

The ends should not be tapered, and the surface of the loaf should be even across the top. It is important that your pans measure 8 inches long by 4 inches wide (this is a standard size; the next size up is 9 inches long). Place the loaves in their pans, making sure that the ends of the loaves touch the ends of the pans to guarantee an even rise. Watch our [Shaping Whole Wheat Loaves Video](#) to see you this is done. The purpose of this method is to create internal and external surface tension in the dough to give you a strong, even rise.

Cover the pans with lightly misted plastic wrap and set aside in your warm place to rise for about an hour, or until about doubled. The dough should be domed about one inch or so above the edge of the pan before baking.

Baking

As originally written, this recipe was intended for baking in a 350° home oven for about 35–45 minutes. In your Forno Bravo pizza oven, with a hearth temperature of around 500°, and the door in place, these breads should take about 20 minutes to reach an internal temperature of 190° F. Turn one loaf out of the pan at this time, and take its temperature to be sure. The sides of the loaves should be golden where they meet the sides of the pan. With an enriched formula pan bread of this kind, injecting steam into the oven is not necessary. Tent the loaves with aluminum foil for the last five minutes or so if the tops are getting too brown for your liking.

If you enjoy this sandwich bread, the next time you make it, toast sunflower, pumpkin and brown sesame seeds in a frying pan until they just begin to crackle. Let cool and add them all during the last two minutes of machine kneading. After that, experiment with your favorite enhancements.

**This recipe is a much amended version of one by Tami Smith that appears in www.baking911.com.*

No-Knead Bread

(Makes one 1 ½ lb [650 gr.] loaf)

The notion of baking bread without any kneading is not new, but the method received a lot of attention when it appeared in *The New York Times* on November 8, 2006. The formula given here is an adaptation of Jim Lahey's version as it was given there. This bread is so simple to make, you will hardly believe it at first. It should be stressed from the outset that to get a good, open crumb in this type of bread, quick, gentle handling is a must. To learn the best method, watch our [Handling Wet Dough Video](#).



The classic open-whole structure seen in this No-Knead Bread results from gentle handling, high hydration in the dough and high-temperature baking.

Dough

15 oz. flour (either half bread flour and half all-purpose, or all-purpose only, plus more for dusting)

¼ tsp. instant dry yeast (IDY)

2 tsp. sea salt

12 ¼ oz. filtered, bottled (no salt added) or spring water

While you are weighing your flour, add in a few tablespoons of whole wheat flour and a few tablespoons of wheat germ before you reach your target weight with the other flours. Don't exceed 15 ounces in total. Make it once, and you may want to experiment with other flour combinations, including up to 30 per cent whole grain or whole wheat, or 10 per cent rye.

In a large bowl, stir together the flour and the yeast. Add the water and stir until the dough begins to come together. Add the salt and continue stirring until blended. The dough will be very sticky.

Using a plastic dough scraper dipped in cool water, transfer the dough into another large bowl that has been misted with spray oil. Cover this bowl tightly with plastic wrap. Let the dough ferment, at warm room temperature (70° F), for at least 12 hours and as much as 18.

Forming

The dough is ready to go when the surface shows a consistent pattern of bubbles as it does below.



Using a plastic dough scraper dipped in cool water, *very gently* turn the dough out of the bowl onto a well floured work surface. (You can get an even layer on the surface by sprinkling the flour from a fine sieve.) Sprinkle the top of the dough with a little more flour. Gently place your floured left hand in the middle of the dough, then pull the end of the dough toward you a few inches with your right hand. Fold that portion to the center of the dough (where your hand was). Repeat with the other end of the dough, and then fold the dough into a rectangle, like a letter. Loosely cover the dough with plastic wrap and let rest for about 20 minutes.

While the dough is resting, turn a sheet pan upside down. Cut a piece of parchment paper to fit the flat side (or use a Silpat non-stick mat if you have one). Mist the parchment paper with spray oil. Now quickly and gently shape the dough into an approximate ball (shaping is not too important in this recipe; close will do.) Sprinkle the sprayed parchment paper with flour, and then flour your hands. Very gently place the dough, seam side down, on the parchment paper. Mist the surface of the dough with spray oil, dust with flour, and cover completely but loosely with plastic wrap. Let it rise for about three hours in a warm, draft free area, or until more than doubles in size. It should not spring back quickly when you poke it with your finger.

Baking

A half hour, roughly, before the dough is ready, put a six quart, heavy, cast iron pot with the lid in place on the floor of your oven. The floor temperature should be 550° F. The pot can be round or oval, as the illustrations show, and the shape and size will affect the shape of the finished loaves (experiment here when you've made it once). A four quart pot, either round or oval, will result in a taller loaf.

Once the dough is ready, use oven mitts to take the pot out of the oven. Remove the lid. Slide the parchment paper off the pan onto your right hand and turn the dough, seam side up, into the pot. If the dough looks at all lumpy, give the pot a shake to even it out.

Cover with the lid and bake for 30 minutes. Remove the lid and bake another 15 minutes or so until the bread is well browned. The internal temperature should be 205° F. Turn the bread out of the pot and cool completely on a wire rack.

There is no need to inject steam into your oven for this bread, because the covered pot traps the steam from the very wet dough.

Try stirring in chopped fresh herbs once the flour is hydrated in the bowl: chives, parsley, basil or oregano would make it go nicely with soft cheeses, such as Brie.



As it rises, the bread will take on the shape of the pot you use.

*Parisian Baguette**

(Makes 3 small *baguettes* or many breadsticks)

This formula is primarily used for the typical long, skinny loaf seen in Paris, but it can be made into many other shapes, from breadsticks to rolls. Using a preferment, this time in the form of *pâte fermentée*, gives the loaves a depth of flavor that can't be achieved any other way. This is a two-day bread, but the first day's preparation is very simple.



Four baguettes made from this recipe are shown in the foreground, surrounding a jug full of breadsticks made from the same dough.

Day One, Pâte Fermentée (16 oz.)

5 oz. unbleached all-purpose flour
5 oz. unbleached bread flour
 $\frac{3}{4}$ tsp. sea salt
 $\frac{1}{2}$ tsp. instant yeast (IDY)
7 oz. filtered, bottled (no salt added) or spring water at room temperature

Stir the flours and the yeast together in a medium sized bowl. Add the water and stir with a large metal spoon until a ball just begins to form. Add the salt and continue to stir until the flour is completely hydrated. Turn the dough out onto the lightly floured counter and knead vigorously by hand, pushing the dough away from you with both hands, then taking it up to shoulder height and slamming it down on the counter as shown in our hand kneading video clip. Knead in this fashion for six minutes. Sprinkle on flour as required until you have a smooth dough ball that is tacky but not sticky. The internal temperature of the dough should read between 77° to 81° F.

Mist a bowl with spray oil, and roll the dough ball in it to coat with oil. Cover the bowl tightly with plastic wrap. Ferment until the dough rises to about 1½ its original volume (about 1 hour). Transfer the dough to the counter, and degas it by kneading lightly (no slamming). Return it to the bowl, recover with plastic wrap and put it in the fridge overnight. *Pâte fermentée* will keep in the refrigerator for as many as three days. You can also freeze it for up to three months in an oiled freezer bag.

Day Two, Dough

Pâte fermentée (16 oz.)

5 oz. unbleached all-purpose flour

5 oz. unbleached bread flour

¾ tsp. sea salt

½ tsp. instant yeast (IDY)

7 oz. filtered, bottled (no salt added) or spring water at 90° to 100° F

Take the *pâte fermentée* out of the fridge and cut it into ten or so small pieces with your pastry cutter. Cover with plastic wrap and let rest for one hour to warm up before making your dough.

Stir the yeast into the combined flours. Add the water to the bowl of your mixer, and then pour in the flour. Use speed one for about a minute or so, and then add the *pâte fermentée*. Continue mixing until the ingredients form a shaggy ball. Add the salt at this stage, switch to speed two, and knead for four minutes or so. Take the dough's temperature. If you're at the low end, continue kneading for another minute. At 81° F, though, remove the dough from the mixer and finish it by hand. The properly kneaded dough should be tacky to the touch, but not sticky. If it is, sprinkle on a bit more flour and continue kneading. The finished dough should be in the right temperature range and pass the windowpane test discussed earlier.

Round the dough into a ball as shown in the video clip for shaping a *boule* later in this chapter. Lightly mist a large bowl with spray oil, turn the dough into it, and roll it around to coat with oil. Give the top of the dough ball a quick spray, and then cover the bowl tightly with plastic wrap.

Forming

Let the dough ferment at warm room temperature for about 2 hours, or until it doubles in size. This is a fairly lean dough, meaning it will not be sticky, so turn it out onto a *lightly* floured counter. Cut it, by weight, into three equal pieces, with a floured pastry knife as shown in the [Baguette Shaping Part One Video](#). The dough shown there is a double batch, with part of it being reserved for breadsticks.

The second clip shows the method for forming these loaves to add surface tension, as well as the use of a *couche* to encourage the loaves to rise upwards rather than spread outwards. The [Baguette Shaping Part Two Video](#) demonstrates this technique. Mist the tops of the loaves with spray oil, and cover loosely but completely with plastic wrap. Proof the loaves for about 45 to 75 minutes, until they have risen to 1½ times their original size.

Baking

Steam your oven for 10 seconds, 10 minutes before the loaves are loaded.

Depending on how they were formed, these loaves might be too long for your pizza peel. If so, make a simple, rectangular baguette peel from half-inch plywood, about 6 inches wide and 36 inches long. It will not need a handle for smaller ovens. Flour the surface of the peel. At Mary G's, we prefer to use brown rice flour for this purpose, because it does not burn easily. Slide a long, flexible spatula (sometimes called an icing spatula) under each loaf and place it on the peel and dock or slash it with three separate cuts down the length and center of the loaf. Think of it as

cutting a thin flap on each loaf of bread. Load them, one at a time, onto a 550° hearth, by tipping your homemade peel sideways, not trying to jerk them off the front. If you're feeling brave, load two and then one. Immediately steam the oven once more, and then seal the oven door.

Bake for ten minutes, then crack the door to allow the steam to escape and the crust to set for two minutes more. At the 12 minute mark, remove one loaf from the oven with your pizza peel. The internal temperature should be 205° F or above, the slashes will have opened, and the loaves should be a rich golden brown.

Be patient. Cool them on wire racks for at least an hour before serving. The shelf life for these breads is two days in paper bags. This formula can be easily doubled or tripled.

Variations

This is a versatile dough that can be made into rolls or breadsticks. The technique for forming rolls is shown under the Kaiser recipe later in this section, and you can take a look at the [Breadstick Shaping Video](#) to see how they are made. Simply roll out the dough you've set aside from your baguette making to about ¼ inch thick. Using a pizza wheel-cutter, slice the dough into ½ inch strips (don't be too fussy about shape, irregular is better), place them on oiled parchment paper, spray the strips with water or oil, and sprinkle on your choice of sea salt, spices or poppy seeds in any combination. Loosely but completely cover the sheet pan with plastic wrap, and let the sticks rise for the same time as the baguettes. A little longer won't hurt.

Place the sheet pan on the hearth, steam briefly, then seal the door. These will bake in a flash. Check after five minutes. If the tops show good color, and the sticks have risen well, remove them immediately. Again, be patient with cooling. These are best eaten the same day as they are baked.



**This recipe has been adapted for wood-fired baking from the formula given in Peter Reinhart's [The Bread Baker's Apprentice](#).*

*Kaiser Rolls**

(Makes 9–10 medium-sized rolls)



Barbecued hamburgers, ham and cheese or corned beef with Russian dressing will be unforgettable on these chewy, tasty Kaisers. Wood-fired baking gives them the volume and texture to stand up to the sloppiest concoction.

So-called Kaisers are everywhere these days, from supermarket bins to small bakeries. Unfortunately, most are made with generic recipes, bleached flour and too many are extruded by machine before being baked on gas decks. The look might be right, but the actual bread is flavorless. They bear little resemblance to the chewy delights of childhood memory. The rolls from this formula bring back that memory, because they have added flavor and complexity of a *pâte fermentée* preferment. They hold their shape, even when loaded with burgers and tons of toppings. They do not turn to mush, and they're easy to make.

Like the Parisian *Baguette* recipe given earlier, this is a two-day process, but preparation on the first day is very quick.

Day One, Pâte Fermentée (16 oz.)

5 oz. unbleached all-purpose flour
5 oz. unbleached bread flour
 $\frac{3}{4}$ tsp. sea salt
 $\frac{1}{2}$ tsp. instant yeast (IDY)
7 oz. filtered, bottled (no salt added) or spring water at room temperature

Stir the flours and the yeast together in a medium sized bowl. Add the water and stir with a large metal spoon until a ball just begins to form. Add the salt and continue to stir until the flour is completely hydrated. Turn the dough out onto a lightly floured counter and knead vigorously by hand, pushing the dough away from you with both hands, then taking it up to shoulder height and slamming it down on the counter. Knead in this fashion for six minutes. Sprinkle on flour as

required until you have a smooth dough ball that is tacky but not sticky. The internal temperature of the dough should read between 77° to 81° F.

Mist a bowl with spray oil, and roll the dough ball in it to coat with oil. Cover the bowl tightly with plastic wrap. Ferment until the dough rises to about 1 ½ its original volume (about 1 hour). Transfer the dough to the counter, and degas it by kneading lightly. Return it to the bowl, recover with plastic wrap and put it in the fridge overnight.

The finished Kaiser dough requires just 8 ounces of *pâte fermentée*, so you can divide it in half once it has rested in the refrigerator overnight. Freeze the extra 8 ounces for your next batch in an oiled freezer bag, or simply double the formula below.

Day Two, Dough

Take the *pâte fermentée* out of the fridge and cut 8 ounces of it into ten or so small pieces with your pastry cutter. Cover with plastic wrap and let rest for one hour to warm up before making your dough.

8 oz. *pâte fermentée*
10 oz. unbleached bread flour
¾ tsp. salt
1 tsp. diastatic barley malt powder (See Books and Resources)
1 tsp. instant yeast (IDY)
1 large egg (slightly beaten)
1 ½ Tbsp. olive oil
6 oz. filtered, bottled (no salt added) or spring water at 90 to 100° F

Stir together the flour, yeast and malt powder in a bowl. Add the water, *pâte fermentée*, egg and olive oil to the bowl of your mixer. Mix these wet ingredients briefly with the paddle attachment. Add the dry ingredients and mix with the dough hook for one minute or until a dough ball forms. Add the salt, and then knead for four to six minutes, adding flour or water to make a dough that is soft and tacky, but not sticky. Take the dough's temperature to insure you are in the 77 to 81° range. Continue to knead if you are on the low side. Otherwise, turn the dough out onto a lightly floured surface and knead by hand as shown in the video clip listed in Chapter 2. Once the dough is at the proper, fully kneaded temperature, passes the windowpane test and has been formed into a ball, turn it into an oiled bowl, rolling it to coat with oil.

Cover the bowl tightly with plastic wrap and ferment for about 2 hours, or until the dough has doubled (watch the dough; it may double much sooner, depending on the strength of your yeast and the warmth of your kitchen.)

Turn the dough out onto a lightly floured counter. Use your dough knife to divide the dough into 9 equal pieces at about 2 ½ ounces each. If you prefer larger rolls, divide into 6 equal pieces at about 4 ounces each.

Forming

To see the technique for making Kaiser rolls, you can watch the [Kaiser Roll Shaping Video](#). Again, surface tension is the key for a strong rise. It is traditional, but not necessary, to use a Kaiser Roll cutter (see Books and Resources) as shown there. If you don't, you will not have to flip the rolls between the first and second rise. Instead, simply let them rise for about 75 minutes in total, or until double their original size.

If you are using a cutter, flour it each time you use it to prevent sticking. Press the cutter almost, but not completely to the bottom of each ball. Turn them, cut side down, onto a sheet pan that has been lined with parchment paper and misted with spray oil. Cover loosely but completely with

plastic wrap. Let rise for 45 minutes. Flip the rolls over so the cut side is up and proof for an additional half hour or 45 minutes, or until they are double their original size.

Baking

Your oven floor should be at about 500° (550 is okay, too, but be careful with baking times). Steam the oven ten minutes before baking. Mist the tops of the rolls with water and sprinkle on poppy seeds if you wish. Load the pan(s), parchment paper and all, into your oven. Steam again. Bake for approximately 10 minutes, cracking the door after 8 minutes to let the steam escape. At the 10 minute mark, take the temperature of one roll. They're done when the thermometer registers 200° F.

Cool for at least half an hour on wire racks. These rolls freeze very well in tightly sealed freezer bags.

**This recipe has been adapted for wood-fired baking from the formula given in Peter Reinhart's The Bread Baker's Apprentice.*

Ciabatta

(Makes 4 medium loaves)*

Now that we've looked at some straightforward recipes, it's time to get a bit more serious. Ciabatta is a wonderful rustic Italian bread, but making the dough can be daunting, if not scary, because it is so wet. Don't despair. It will be fine; finer yet from wood-fired baking. In some ways, this formula is one step above No-Knead Bread.

This is also a two-day bread, but the first day requires little labor.

Day One, Biga

This is a somewhat different formula from that used in our *Biga* Whole Wheat Bread, and it makes about 1 lb, 5 oz. of starter.

¼ tsp. active dry yeast (ADY)
2 oz. filtered, bottled (no salt added) or spring water at 90 to 100° F
6 5/8 oz. water at room temperature
11 5/8 oz. unbleached all-purpose flour

In a large bowl, stir the yeast into the 2 oz. of warm water and let stand about 10 minutes until creamy. Then stir in the rest of the water and the flour, a scoop at a time. Mix with a wooden spoon for 4 minutes. Oil another large bowl and transfer the *Biga* to it. Tightly cover the bowl with plastic wrap, and let it rise at cool room temperature (70° F) for 6 to 24 hours. When it's ready, it will have tripled in volume and be very sticky and wet. Cover and refrigerate until ready to use. This recipe makes more than enough for the dough on day two. Oil a freezer bag and freeze the remainder until next time.

Day Two, Dough

1 tsp. active dry yeast (ADY)
2 ¼ oz. whole milk at 90–100° F
9 ¼ oz. filtered, bottled (no salt added) or spring water at room temperature
1 Tbsp. olive oil
9 oz. Biga, made at least 12 hours previously (if it has been refrigerated, take it out of the fridge and let it warm up for 1 hour before using)
1 lb, 1 5/8 oz. unbleached all-purpose flour
1 Tbsp. sea salt

Add the milk to the bowl of the mixer, and then stir in the active dry yeast. Let stand for 10 minutes until creamy. Add the oil, water and 9 ounces of Biga. Mix with the paddle until blended. Add the flour and mix for 2 or 3 minutes. Switch to the dough hook. Add the salt and knead for 2 minutes on low speed, the 2 more minutes on medium speed. Flour the counter well. Turn out the dough and knead by hand (no slamming is necessary here), but be careful to add as little flour as possible. Knead until the dough is very springy, moist and supple.

Oil a large bowl, place the dough in it, but do not turn it to coat. Instead, lightly mist the top of the dough with spray oil. Tightly cover the bowl with plastic wrap. Let rise until doubled; about 1 ¼ hours. The dough should be very sticky, elastic and full of air bubbles.

Forming

Very gently turn the dough out onto a well floured surface, helping it along with a plastic bowl scraper dipped in cool water. Divide into four equal pieces with a dough cutter dipped in water.

Cut the pieces by eye; the dough is too wet to use a scale. Roll each piece into a cylinder, but don't try to pinch the seams. Stretch each piece into a 10 x 4 inch rectangle. Each piece will require its own baking sheet, lined with oiled parchment paper, generously dusted with flour. Place one loaf on each sheet. Vigorously dimple the doughs all over with your fingertips, pressing almost to the bottom of the loaves. At this point, they will look dreadful. Don't despair.

Cover with dampened towels and proof for 1 ½ to 2 hours, or until puffy but not doubled.

Baking

Steam the oven for 10 seconds, 10 minutes before baking. The hearth temperature should be 500–550° F. Generously sprinkle your pizza peel with brown rice flour using a fine sieve. If your oven is large enough, load all four loaves at the same time, leaving enough room between them for oven spring. Steam again for 10 seconds and seal the door. Bake for 10 minutes, and then crack the door to let the steam escape for another 2 minutes. The internal temperature of the baked loaves should be 205° F after approximately 12 minutes of total bake time.

Rather than crowd the loaves, if your oven is a smaller version, simply load two loaves and let the other two rest while you bake the first batch. Remember to steam again when the second batch goes in.

**This recipe has been adapted for wood-fired baking from the formula given in Carol Field's The Italian Baker.*

*Boule au Levain**

(Makes two 1 kilo [2.2 lb] round hearth loaves)



Show here is a variant of this recipe that includes brine cured olives, Kalamata olives and fresh thyme, all kneaded into the dough during the last two minutes.

This recipe constitutes graduation day. The formula uses a wild yeast starter and a long, cool rise to develop maximum flavor from the grains. Often called a sourdough, barm or *levain*, there are many, many ways to cultivate a wild yeast starter. Some seem to involve voodoo or late night incantations. Neither is remotely necessary, and simple is better. The easiest and most successful method to propagate the yeast and bacteria cultures needed for characteristically sour breads is contained in Peter Reinhart's *The Bread Baker's Apprentice*, pp. 229–32. Making the seed culture takes four days, but the amount of time involved is miniscule. The seed culture is then turned into a barm that, cared for properly, will last indefinitely.

In Chapter 5, you'll find a source for purchasing dried sourdough starters. Although there is a lot of talk about the superiority of one dried starter over another, it's important to know that once you hydrate it and expose it to the air in your kitchen, the dominant yeast strain in your area will take it over eventually.

Another source is from Jack Lang at The eGullet Society for Culinary Arts & Letters: <http://forums.egullet.org/index.php?showtopic=27634>. For a donation to your favorite local charity, he will send you a free portion of his starter. Although our methods differ somewhat, Jack is a master baker, and this thread will also introduce you to his very well illustrated demonstration on artisan bread baking. Joining the eGullet Society is free and highly recommended.

Yet another possibility is to contact Jim directly at info@marygbread.com for enough barm to get you going, along with instructions for its care and feeding. This is not something we do very often, although the tuition for our baking classes includes barm to take away. The cost is \$10, plus shipping. You'll receive it in a dried state.

Day One, Dough

1lb, 2 oz. filtered, bottled (no salt added) or spring water at 70° F
12 ½ oz. barm/white sourdough starter
2 lbs, 2 oz. unbleached hard bread flour

½ cup raw wheat germ
3 tsp. sea salt

Add the water and barm to the bowl of your mixer. Mix with the dough hook for a minute or so, until the water turns white. Add the flour and knead for four minutes. Cover the bowl and let the dough rest for 20 minutes. Add the salt and mix for about 4 more minutes. The dough should feel resilient, soft, and register between 76–78° F. Turn out onto a lightly floured counter and knead by hand about 2 minutes using the method shown in our hand-kneading video clip. The dough should be tacky, but not sticky. If it is, knead in a bit more flour. It should pass the windowpane test. Bear in mind that this is a fairly high-hydration dough, so do not knead in so much flour that you make the dough stiff. It's quite alright if it requires a bit of effort to separate the palm of your hand from the dough (something like peeling off masking tape, but not quite so sticky), as long as bits of dough do not stick to you hands.

Turn the dough into a large oiled bowl, mist the top of the dough with spray oil and cover tightly with plastic wrap. Proof at room temperature for at least 4 hours, or until the dough has doubled in volume. Until you've made this bread several times, it's best to pull off a portion about the size of a small orange and put it in an oiled, straight-walled glass beaker. Mark the original level with one piece of tape and the doubled level with another. Once you're sure that the dough has doubled, you can simply slip this under one of your scaled pieces of dough to bring it up to weight with the other one.

Forming

Turn the risen dough out onto an unfloured counter. Cut into two equal pieces by weight. Drop each piece on the counter a few times to deflate the dough a bit. Tuck the corners under to form a rough circle, then cover the pieces loosely but completely with plastic wrap and let rest for 15 minutes. While they're resting, lightly but completely flour your *banneton* rising baskets using a fine sieve. Alternately, use the type of round wicker baskets found in restaurants. These should be lined with linen that has been misted with spray oil and dusted with flour.

Form the dough into round hearth loaves as shown in our [Boule Forming Video](#). Care should be exercised to turn the edges of the hands under as the dough is rotated to give you enough surface tension. Neither the counter nor your hands should be floured at this point. Gently turn the rounds into your rising baskets, seam side up, and pinch shut any open seams. Mist the seam sides with spray oil and cover each basket completely with cloth to avoid forming a crust on the dough. Proof at room temperature for about 2 hours, or until the loaves rise about 1 inch.

Remove the cloth, wrap each basket completely and tightly in plastic wrap and refrigerate overnight.

Day Two, Baking

Take the boule out of the refrigerator 2 to 2 ½ hours before you plan to bake, so they continue to proof. Remove the plastic wrap and cover the baskets completely in cloth while the loaves warm up. The interior temperature should be 58° F before they go into the oven. Alternately, if you're in a rush, you can go directly from the fridge to the hearth, but your bake time will be increased.

Steam the oven for 10 seconds, 10 minutes before baking. Dust your peel(s) with brown rice flour. If you're using *banneton*, run your fingers around the upper perimeter of the loaves to allow them to release easily. Invert the baskets to release the loaves onto your peel(s). If you're using linen-lined baskets, just peel off the cloth. Take your time here; it's not a race. Slash or dock each loaf as shown in our short [Loaf Docking Video](#).

Load the loaves onto a 550° hearth, steam again for 10 seconds and seal the door. At the 20 minute mark, crack the door to allow the steam to escape and the crust to develop. Bake for 2

minutes longer. After 22 minutes, take the temperature of one loaf: it should read at least 205° F. Return them to the oven with the door off for a minute or two if you haven't reached that temperature or above.

Cool completely on wire racks before slicing. Because of the acidity in wild yeast dough, these loaves will last three days at room temperature in a paper bag. They freeze with good results.

**This recipe has been adapted for wood-fired baking from the formula given in Nancy Silverton's Breads from the LaBrea Bakery.*

Chapter 5. Books and Resources

There are many fine baking books on the market. This is a short list of those that we use on a regular basis at Mary G's Artisan Breads:

Jeffrey Hamelman, *Bread: A Baker's Book of Techniques and Recipes* (New Jersey: John Wiley & Sons, 2004). Primarily aimed at the professional baker, this incredibly thorough book is the best one out there on technique and theory. Recipes are scaled for both large batches and home use. Hamelman's range is wide, and his formulas do not appear elsewhere.

Carol Field, *The Italian Baker* (New York: HarperCollins Publishers, 1985). When you're making the transition from pizza to bread, Field will guide you through a very large collection of Italian recipes, from *Pani to Dolci*.

Peter Reinhart, *The Bread Baker's Apprentice* (Berkeley, CA: Ten Speed Press, 2001). If we only had one bread book on our shelves, this would be it. Reinhart strikes a fine balance between theory and practicality as he covers a wide range of recipes, from bagels to sourdoughs.

Nancy Silverton, *Breads from the LaBrea Bakery* (New York: Villard, 1996). Silverton has her own methods and style, both of which are unique and captivating. Her recipes have become standards in artisan bread baking, and she includes directions for using a food processor, as well as hand and mixer kneading.

Resources

The number of Internet sites devoted to bread baking and equipment is bewildering, if not overpowering. The links given here are the result of much searching and more frustration until a core list was assembled.

Probably the best website for baking gear is hosted by the San Francisco Baking Institute. Originally started to take the financial sting out of necessary equipment for their students, SFBI's prices are the most reasonable we've found. The selection is limited to such hard to find items as spiral mixers, lame blade holders, Kaiser cutters, couche cloth, long oven gloves and banneton. Visit them at www.sfbaking.com/baking_supplies.html. Their service is personal, courteous and fast.

King Arthur flour is widely available, but ordinarily not every type they mill. Visit their on-line shop at www.kingarthurfLOUR.com. There, you'll find a wide array of specialty flours, graduated dough-doubling tubs, diastatic malt powder, sourdough starters and many other things that will tempt you. Their recipe section is extensive and useful.

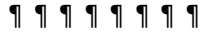
Another recipe site that is particularly helpful for troubleshooting problems in bread baking is <http://baking911.com>. All sorts of baked goods are included, from pies and quick breads to muffins and pan breads.

As mentioned earlier, it is highly recommended that you join the eGullet Society for Culinary Arts & Letters. Many professionals consult the forums on this site for problem solving, recipes and a general interchange about a wide range of topics, including bread. You'll find the society at www.egullet.org. Membership is free.

One of the largest recipe sources on the net is www.epicurious.com. You can find and print everything from holiday dinner menus to bread recipes.

If you have a passion for all delights Italian, be sure to visit www.italianfoodforever.com. The site has wonderful depth and includes articles on Italian culture and regions that are very worthwhile.

For excellent streaming video on bread and pizza making techniques, don't miss Julia Child's programs with master chefs. You'll find them at www.pbs.org/juliachild/video.html.



At Forno Bravo, LLC and Mary G's Artisan Breads, we consider this document a work in progress. New recipes, photographs and video clips will be added as time allows and the need arises. If you have a specific request, need clarification or troubleshooting advice, please post it on the Forno Bravo Forum. Better yet, if you discover a typographical error or a mistake, please tell us about it at info@fornobravo.com.

About the Authors

Jim Wills



Jim Wills is a widely experienced builder and baker who is deeply involved in all aspects of wood-fired ovens, from construction to baking. Jim has built his own, large wood-fired brick bread oven from scratch and launched Mary G's Artisan Breads, a highly successful microbakery in rural Ontario, outside Toronto. His breads have been shipped to discerning buyers from Toronto to California to Pennsylvania. He understands wood-fired ovens and techniques, and the amazing products they produce. He also works with a group of extremely talented individuals in all aspects of oven installation; from masonry to framing; and from outdoor kitchen design to custom trim. His team of experts assembles, installs and finishes residential and commercial ovens throughout Ontario, Canada. Jim is a definite construction perfectionist, who enjoys transmitting the excitement, allure and taste created by wood-fired baking. He is also the host of the Forno Bravo Bread Baking Video Series.

James Bairey



James Bairey, a former Silicon Valley entrepreneur, is CEO and founder of Forno Bravo, LLC. He is an avid amateur baker, and is enamored with brick ovens. James has built wood-fired ovens across the U.S. and Italy, both from scratch and from Forno Bravo kits. It was his experience with other brick ovens that led him to create the Pompeii Oven design and the popular [Forno Bravo Forum](#). After a long career in the computer industry, where he helped launch a number of successful Internet companies, James is now having a great time building Forno Bravo into the leading supplier of Italian pizza ovens and pizza ingredients for home owners, restaurants, pizzerias and bakeries.