

Bread is a Many-Splendored Thing: Three Medieval English Loaves

Presented by Lady Eulalia de Ravenfeld, AS XXXXIII

General Remarks

Bread was *the* staple food of the Middle Ages. Indeed, up to 80 percent of a harvest-worker's calories came from grains; for a soldier, 78 percent, and for the lay nobility, 65-70 percent (Woolgar et al). But just as when we say "bread" we may mean anything from artisan whole-grain to homemade to grocery store white and everything in between, medieval people ate a wide variety of breads.

Being such an important staple, bread was heavily regulated following the Assize on Bread in the 13th century. This set a standard by which the weights of different types of loaves, each costing a farthing, were set by the price of a quarter of wheat. (See Halsall in Sources for a link to the text of the Assize in modern English.) Higher grades of bread were those made from wheat flour only, while lower grades included other grains such as rye, barley, oats, and even peas and beans. For most people, bread was a purchased product made by professionals. Large households did bake their own bread, though, both for the high table and for the *famuli* (servants), as well as to be given away as boons to laborers during the harvest.

In order to convey the spectrum of breads available to different classes of people historically, I have prepared three loaves representative of those eaten in England during the High Middle Ages: one wastel (sifted wheat flour), one maslin (wheat and rye mixed), and one horsebread (rye, barley, oat, and pea flours).

The Basic Process Used for Each Loaf

To leaven my breads, I used sourdough starters. At least one bread recipe has come down to us (in Platina) which supports the idea of sourdough as leaven: "Therefore I recommend to anyone who is a baker that he use flour from wheat meal, well ground and then passed through a fine sieve to sift it; then put it in a bread pan with warm water, to which has been added salt, after the manner of the people of Ferrari in Italy. After adding the right amount of leaven, keep it in a damp place if you can and let it rise. That is the way bread can be made without difficulty. Let the baker beware not to use more or less leaven than he should; in the former instance, the bread will take on a sour taste, and in the latter, it becomes heavy and unhealthful and is not readily digested. The bread should be well baked in an oven, and not on the same day; bread from fresh flour is most nourishing of all, and should be baked slowly." (Cullinan) Another possible leavening was barm, the by-product of ale production, although I have not seen much research into this. I have experimented several times with barm and found it closer in performance to commercial yeast than sourdough.

Sourdough is easy to make and works well as a leavening agent – natural yeasts are captured in flour and water (a starter), and a bit of each loaf can be saved to start the next. I created two starter cultures (one of wheat and one of rye) by mixing flour and water and allowing them to stand, covered with a cloth, until a good culture of yeast had grown (after a few days, bubbles form in the starter; I like to wait a few more days until the starter has separated into two distinct layers, one more solid and one completely liquid, and smells very sour).

Each of my loaves was baked by weight, as medieval bakers would have done (as the size of loaves was regulated by weight). I decided to assume that the weight of water added to the

dough would escape as steam during baking; although this may not be true, weighing the flour alone is much simpler. This could result in over-weight loaves, but cannot result in under-weight loaves, which makes this a likely tactic used by medieval bakers. Thus when I speak of a "one pound loaf" what I mean is that I used one pound of flour to make it. I spent a long time calculating and weighing my flours (the specific compositions of each loaf are discussed in detail later). All of my flours were stone ground from Bob's Red Mill (with one exception, noted later).

For each loaf, I mixed a portion of flour with some starter and some water and let this (called a sponge) work overnight. When each sponge was fully developed (this takes longer with different types of flour – a good sponge will be bubbly and appear kind of ropy), I mixed in most of the remaining flour and some salt (I used 1 tsp per pound of flour) to form a sticky dough. I then kneaded in the rest of the flour, until the dough was smooth and elastic.

In sourdough baking, a better product is achieved through patience: letting the sponge develop overnight, waiting through two risings, and then proofing the loaves. For the first rising, I usually coat the ball of dough very lightly with butter and place in an oven that has just barely warmed above room temperature before being turned off. Yeast tend to proliferate more rapidly in warm, humid environments. I imagine that a medieval bakehouse tended to be a pretty hot, steamy place; using my oven is the closest I can come. After the dough has doubled in size, I punch it down, knead a few strokes, and repeat the same rising process. After the second rising, I again punch and knead the dough, then shape into loaves and place them on parchment paper (this modern conceit makes the dough easier to maneuver). When the loaf no longer springs back from a finger poked in it, and a distinctive gluten skin has developed on it, it is ready to bake (this is "proofing"). I slash the tops at this point.

Unfortunately, in my case this process went somewhat awry. My sponges all developed beautifully, but when I set the loaves to rise the first time (incidentally, only the wastel was buttered; the other two were rolled in flour instead), none of them really got going. I am not sure what happened. This is the first time that I have done all whole grain sourdough baking, in the past I've used a mix of white and whole flours. This is also the most closely I have ever followed a completely period process for baking. I plan to continue to experiment with this until I can get it right. In the meantime, with a heavy heart I added a tiny bit of modern commercial yeast (started in honey and water) to each loaf, which perked them up enough to bake. However, by the time I did this I no longer had time for the double rise cycle; I let the loaves rise once and then proofed them.

I do not have a medieval oven at my disposal. I have found in the past that the current fad of baking a loaf of bread inside a cast iron Dutch oven can mimic some of the characteristics of period ovens – more steam is retained and the loaf is exposed to three types of heat (radiation, conduction, convection). Each of these loaves was baked in this fashion.

Historical bread recipes are hard to come by. Bread was by and large baked by professionals who seem to have guarded their secrets well (or else did not have to record instructions as no one else had need of them). While I cannot be certain that the methods I am following, which I have learned through trial and error and through consulting modern guides to sourdough baking (in particular see Denzer in Sources), are historically accurate, for my own self I am comfortable with their plausibility. Indeed, the largest deviation I have made from period practice is in baking three distinctive types of bread at the same time at home and only baking a small amount at once. I worried endlessly about having to bake these loaves the day before the competition. I came across an interesting reference, though, to a particular household only

baking bread between six and eleven times per month (Woolgar et al) – it may not be what we prefer, but day-old bread is likely very period.

Details of Each Loaf

1. Wastel Loaf

This is the bread favored by the wealthy, the nobility, and royalty. It is made exclusively from wheat flour which has been "bolted" (sifted through cloth) to remove the bran and yield a fluffier, lighter product. My attempt to bolt whole-wheat flour failed, as I did not have any cloth of the right weave. I ended up using a very modern fine metal strainer to sift out the bran, which worked very well.

A half-penny loaf of wastel bread during the reign of Edward I weighed just about two pounds (Spufford), so I assume a farthing loaf likely would have weighed about a pound. The wheat loaves baked for various great households in the 13th through 15th centuries also hovered right around a pound in weight (Woolgar et al). Thus I decided to use a pound of flour for this loaf, which I weighed after sifting. I used a starter made from regular (unsifted) whole-wheat flour.

I kept the dough for this very wet and sticky. I have found that a wetter loaf often rises better and has a better final texture. Wastel would have been baked at a higher temperature than lower-grade loaves (ibid), which also results in a lighter, more airy crumb. I started this loaf at 400°F, later reducing the temperature to 350°F.

2. Maslin Loaf

Maslin is a mix of wheat and rye (whole grain) flours. Rye was easier to grow in poor soil and was thus widely eaten in England (Hammond). One record from the turn of the 14th century shows a Bishop receiving payments from peasants for corn grinding on 158 bushels of maslin compared to only two bushels of wheat (Woolgar et al). I have not seen reference to what percentage of each type of flour was included in a maslin loaf; I suspect that this is because the word "maslin" actually refers to wheat and rye grown together in a field, which would have been harvested and ground together without being weighed separately first. I decided to use half wheat and half rye. During the reign of Edward I, a half-penny loaf of "coarse bread" weighed twice as much as the same of wastel (Spufford), so I used two pounds of flour for this loaf.

I used the same whole-wheat starter for this as for the wastel, but baked at a lower temperature (350°F).

3. Horsebread

Horsebread, so named because it was in fact fed to horses, was the roughest loaf of bread available in period. It was composed of a mix of many different grains, often rye, barley, oat, pea, and bean; I have seen reference to wheat bran, presumably left over from the production of wastel, being added to horsebread as well. Boons given during harvest time were often composed of maslin and rye, rye and barley, or just barley, however, this is probably not representative of what peasants ate the rest of the time (Woolgar et al). The *famuli* on demesne farms received mixed grain breads, which may be more representative of the typical peasant diet; one late 13th century household provided bread made from 45% rye, 33% barley, and 22% "bulmong" (a mix of oat, pea,

and bean flours) (ibid). It is this mix that I decided to use for my loaf. I made a rye starter for this loaf, which actually performed better than the wheat starter.

Two early 14th century references to loaves given as boons show their size hovering just over and just under three pounds (ibid), so I used a total of three pounds of flour for this loaf. Using the above percentages, and rounding up a little, I used 22 oz rye, 16 oz barley, 6 oz oat, and 5 oz pea. I did not use bean flour as I could not find it; I would like to try this loaf again with fava bean flour replacing some of the oat and pea flours. I was not able to find pea flour, but I did have some green split peas¹ and my mother was kind enough to let me use her hand-cranked grinder (a thoroughly modern contraption, but I did use the stone grinding plates). I found I had to grind the peas multiple times, sifting out the big chunks and running them back through. I still was not able to get a perfectly fine grind, but I imagine that this is more accurate for what would have been a low-cost product.

It is my belief that horsebread would have been baked at a rather low temperature. For one thing, fuel was expensive in this period (Woolgar et al list coarse loaves using half as much fuel as wastel; considering how much larger a coarse loaf was, the effect must have been even more pronounced). I also found a reference (in *Earth Oven*) to some sourdough whole grain (non-wheat) loaves turning out tastier when baked at lower temperatures with lots of steam; the amateur food scientist in me suspects this has to do with the very low gluten content in the grains involved. I baked this loaf at 300°F, brushing the top generously with water before hand.

Conclusions

This was, for me, an incredibly fun project. I fully intend to continue researching and experimenting with sourdough baking and different grains. Even without an adorable brick oven, I actually felt that I was able to step into a medieval baker's shoes for a day when I baked these loaves, and I liked it.

Sources

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Spufford, Peter: *Money and Its Use in Medieval Europe*. ©1988, Cambridge University Press.

Hammond, Peter: *Food and Feast in Medieval England*. ©2005, The History Press.

¹ SCAdian publications often state that green peas were not available in period; I have never found independent confirmation of this, and in fact Woolgar et al list "green" among the colors medieval people recorded for peas.