

## Ale Barm Bread with Spent Grains 12<sup>th</sup>-13<sup>th</sup> century Britain

Lady Ursula de Stratton, Barony of Arn Hold



Smithfield Decretals, Late 13<sup>th</sup> c. Royal 20 E IV f. 145v

### Development and Inspiration:

Bread is one of the oldest known foods, and has been recorded in archaeological finds and written records going back for millennia: "Mesopotamian food is known from archaeology and written records on cuneiform tablets, including bilingual Sumerian-Akkadian word lists. These sources indicate the importance of barley bread, of which many kinds are named, and barley and wheat cakes."<sup>1</sup>

Bread was a very large part of the medieval diet, with most people of all classes eating 2-3 pounds of bread per day<sup>2</sup>. St. Augustine even used the bread of the Eucharist as an analogy to discuss the state of a man's soul: "This bread retells your history... you were brought to the threshing floor of the Lord and were threshed... While awaiting catechism, you were like the grain kept in the granary... At the baptismal font you were kneaded into a single dough. In the oven of the Holy Ghost you were baked into God's true bread."<sup>3</sup>

Another source of early information on bread was the English Assizes of Bread, Beer, and Lucrum Pistoris<sup>4</sup>, laying out regulations for types of bread and prices for sale depending on the price of wheat.

<sup>1</sup> Dalby, Andrew, *Food in the Ancient World from A-Z* [Routledge] 2003 (p.216)

<sup>2</sup> Scully, Terrence *The Art of Cookery in the Middle Ages* [Boydell] 1995

<sup>3</sup> Quoted in Edwin S. Hunt and James Murray, *A History of Business in Medieval Europe, 1200-1500* [Cambridge University Press] 1999 (p. 16)

<sup>4</sup> "The Assizes of Bread, Beer, & Lucrum Pistoris." *Medieval Sourcebook* [Fordham University]

These statutes first appeared during the reign of Henry II (1154-1189). These regulations continued to be printed and edited until 1350, illustrating the importance of this staple to the English people, and to the bakers who made it their business.

While many sources<sup>5</sup> tell us of the fine white loaves of wheat flour eaten by nobles, this is in sharp contrast to the bread eaten by common folk. Where economy and nutrition is the goal, a loaf of the cheaper and more readily-available barley, even than that already used in brewing, would provide significantly better fare for the cost, while taking advantage of a good source of active yeast and flavorful malted grains.

The labor required to malt barley is considerable, including soaking the grain to moisten it, then spreading it on a malting floor to be roasted, turning frequently to prevent scorching. After the malted grain was soaked in hot water to obtain the sugary wort needed for brewing, there was still valuable nutrition left in the spent grains. While I have been unable to find sources for what was done with this grain, I find it unlikely that it was thrown away. While it could have been fed to livestock, my guess is that the sweet and flavorful malted grains were probably eaten or used in cooking various cakes, breads, and porridges. I have eaten spent grain still warm from brewing out of curiosity, and it is truly delicious. It retains much of the sweetness of the malted sugars, along with the flavors developed by the roasting process.

The other product necessary to both brewing and baking bread is yeast. There is considerable debate about which came first, beer or bread, but either way the ingredients remain the same: yeast, grain, water. Salt is usually added, and fats or eggs can be used to richen the dough. There is wild yeast in nearly every environment in the world, and this wild yeast would have been the source for the earliest beer fermentations. At the end of the brewing process, when the beer is decanted into bottles or tankards, a large amount of yeast, known in period as ale barm, remains at the bottom of the barrel<sup>6</sup>, consisting of the yeast cells, both living and dead, as well as particulates from the brewing process. It would have been quite easy to scoop up this doughy barm and store it for use in baking, which is exactly what I have done, treating and feeding it like a sourdough starter. This is still done in the folk brewing and baking traditions of the Scandinavian countries.<sup>7</sup>

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<http://sourcebooks.fordham.edu/halsall/source/breadbeer.asp>

<sup>5</sup> One example is Wilson, C. Anne. *Food and Drink in Britain* [Chicago Review Press] 2003

<sup>6</sup> n.b. some sources referred to barm as the foam on top of a fermenting beer. Different yeasts behave differently in different worts, some tending to sink, and others to float, while some do both. Other variables impacting yeast behavior include alcohol content and wort temperature.

<sup>7</sup> Protz, Roger. *The Ale Trail: A Celebration of the Revival of the World's Oldest Beer Style*. Orpington, Kent, UK: Eric Dobby Publishing Ltd. 1995 and Buglass, A. *Handbook of Alcoholic Beverages: Technical, Analytical and Nutritional Aspects*. Volumes I and II. 2011



J. Paul Getty Museum, Ms. 14 fol. 8v, mid-13<sup>th</sup> c.

Peasants in the early middle ages would often cook bread in a communal oven or buy bread from a local cook shop or bakery<sup>8</sup>. The wood-fired clay or brick ovens of the period would be heated with a wood fire. The ashes and coals would be removed to keep food clean and prevent it from tasting like woodsmoke, and the hot oven filled with the day's many loaves. The oven would then be closed up to cook, creating a hot (usually over 500 degrees Fahrenheit) environment, humid from the trapped moisture of the dough. This results in bread with a crusty and crisp exterior but a moist, chewy interior, the holy grail of many bakers. Many modern bakers use wood-fired ovens or attempt to recreate the conditions with baking stones or pans of water in the oven, but I have found a more reliable, and I think, a more accurate method of mimicking this environment.

### **My process:**

#### *Tools used:*

- Standard electric oven
- Glass cooking bowl
- Wooden spoon
- Cast iron stew pot with lid

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<sup>8</sup> Hammond, Peter. *Food and Feast in Medieval England*. [The History Press], 2005.

### *Ingredients used:*

Unbleached wheat flour  
Whole wheat flour  
Spent malted barley from beer brewing  
Ale barm  
Water  
Salt  
Butter

### *Process*

The ale barm, harvested from a batch of beer made by my husband, was placed in a warm place and fed equal parts flour and water to encourage the yeast to become active. After about an hour the barm was foamy and fragrant.

To make the sponge, a cup of ale barm was mixed with two cups of flour (one each of unbleached and whole wheat in an attempt to recreate a more period stone-milled flour) and a cup of lukewarm water to form a sticky sponge. The sponge was then left in a warm place for several more hours (approximately two), until the sponge had doubled in volume. This further encourages the yeast to become active and release more esters, contributing to the flavor of the bread.

The dough was made from the sponge, with the addition of two teaspoons of salt, two tablespoons of melted butter, half a cup of the spent grains, and just enough flour to make the dough easy to work, approximately half a cup. Because I prefer “rustic” bread with large air bubbles and a more chewy texture, I kneaded the dough just enough to mix it thoroughly.

The dough was left to rise on a well-floured surface, sprinkled with flour, and covered with a towel until approximately doubled in size.

To recreate the conditions of a wood-fired oven, with high temperature, radiant heat on all sides, and a humid environment, I heated my oven as hot as it will go (550 degrees Fahrenheit) and placed the cast iron pot and lid inside to heat with the oven. Once the oven was hot, I removed the pot, and carefully placed the dough inside it. I then replaced the lid and baked for about fifteen minutes. I then removed the lid and decreased the heat to 350 degrees, to simulate the gradually escaping steam of the clay oven after it had been opened, and let the bread cook for a further fifteen minutes.

The bread was then cooled on a wire cooling rack.

Note: all measurements are approximate. Like many bakers, I tend to use my hands, eyes, and experience to measure my ingredients most of the time.



*The cast iron pot used for baking.*

### **Final thoughts:**

The decision to try using spent grains and ale barn was one I undertook out of curiosity, based on my experience having these items in my kitchen and having tasted spent grain after brewing. It didn't occur to me until later that medieval bakers would have had the same circumstances and ingredients on hand. I have since learned about the close connection between beer and bread, and the debate rages on about which truly came first, the loaf or the bottle.

Medieval bread recipes are difficult to find. My theory on this is that bread making was originally considered a skill so basic anyone would know how to do it. As techniques became more refined and specialized in the later middle ages, I suspect recipes were closely guarded secrets of individual tradesmen or guilds. Common everyday bread probably included lots of variations, but overall, there are only so many ways to make a basic yeast bread.

In the future I would like to try baking in a wood fired clay or brick oven, and perhaps even build one myself. I have used the bread recipe above on my propane barbecue with good results, so I may try the addition of some wood chips to see if it impacts the flavor of the bread.

I am interested in learning more about the types of grains and strains of wheat available in period. I would like to experiment with different flour blends to try to replicate a more medieval-style flour with less of the hard and high protein wheats engineered in the last hundred years and used today.

I would also like to try using some of the medieval bread recipes I did find. I am especially interested in recreating a horse bread, made with coarser flour with the addition of legumes such as beans, peas and lentils. Gervase Markham published a recipe for Horse Bread in *Country Contentments* in 1615 that would likely be my starting point. Horse bread was nutritionally dense and was fed to both livestock and people. I suspect it would be delicious with a stew or for use mopping up the juices from roasted meat. Maybe I can even find a horse willing to try it!