# EATS Assignment 1: Bagels

So, I make bagels a lot, but rest assured I change them every single time, so I am not just reproducing a recipe I am already an expert at. I target something very specific with my bagels: I am looking for a "breadier" New York style bagel with a chewy yet mildly crackly skin, tiny tiny blisters, a completely even crumb, and a complexly-flavored dough that balances malt, salt, sweetness, and fermentation. I want you to be able to load the (room temperature) bagel up with cream cheese, cut it in half, and bite through it without all the cream cheese squishing out. This is harder to achieve than you would expect, because the dough needs to be sturdy enough to hold up to you biting through the skin of the bagel without deflating, as white bread might; yet I also want the bagels to appear "fluffy", not dense and small, like their Montreal-style bastard cousins.

I am attempting this recipe because the only half-decent bagels in Seattle are the sourdough bagels at Bagel Oasis, or possibly the ones at Loxsmith, although I cannot verify because those are impossible to get. I am Jewish; I love bagels; I want to eat good bagels, and there are none to be found here, so I suppose I must take matters into my own hands. I'm pretty good at making bagels already: my main goals at this point are improving my shaping skills, speed, and consistency. In particular, I've had some trouble adjusting to weather changes: temperature, humidity, etc., all affect my outcomes, and I want to be able to make good bagels every single time. I'm also still playing around with hydration levels: I usually work with a very low-hydration dough, about 49%, and this is absolutely more consistent than my higher-hydration experiments, but the bagels come out a touch denser than ideal. Broadly speaking, this recipe involves a number of techniques: working with yeast, a kind of autolyse step, developing gluten via kneading, an overnight ferment, boiling, high-heat baking, etc.

Before we get into it, I'm also going to talk about some of the bagels I have had, what I am looking for, and what I am not looking for. With my apologies, these bagels from Old Salt embody everything I hate about Seattle bagels, and not just because I first tried them on an extremely uncomfortable first date. They have these huge, unsightly blisters indicating a long fermentation time (I suspect this is also why they do not rise very much); they're small and dense; they're extremely irregularly-shaped, with a huge hole in the middle, again indicating a lack of oven spring. The skin is chewy to the point it is difficult to bite through; the bagel is also way too chewy, sort of becoming gum in your mouth. The looooooooong fermentation time does mean the flavor of the dough is good once you get past everything else. Similar problems plague Little Lago, except their dough is much higher hydration; actually, I wouldn't be surprised if it's just their pizza dough reshaped as a bagel. This means the interior can't stand up to the chewiness of the crust, so it all just squishes together immediately and becomes a dense little puck. Tastes good, though.

Moving on, we have Westman's. These bagels have completely the opposite problem. They look like what I want: big bready sturdy bagels, nice thin skin, even crumb. The problem is with the flavor. You can actually tell based on the color of the dough--it's practically white, unlike the previous bagels, which have a yellowish interior. This indicates a lack of malt, sugar, fermentation, etc.; I'm actually not even sure these bagels have salt.

Rachel's and Oxbow are Seattle bagel darlings, and they're both weird. Rachel's does a pretty good execution of a NY-style bagel except that they use some proportion of whole wheat flour, and they seem to bake the bagels for longer at a lower temperature, resulting in a thick crust more reminiscent of an artisan bread than a bagel. This changes the whole vibe of the thing. Oxbow bagels have a nicely-flavored dough and a genuinely incredible crust (chewy with a barely-there crunch), but they're small, dense, and extremely irregularly-shaped; they lack the slight airiness that I look for in a great bagel.

Finally, we have Bagel Oasis. These are probably the best bagels in Seattle, but only the sourdough ones. They're about the right size (approximately 130g), sturdy yet fluffy, thin chewy skin. They're still a bit bland: the sourdough flavor helps, but I don't think they're fermented very long, and they lack the maltiness and mild sweetness I want.

The best bagels in the world, meanwhile, come from Teaneck Road Hot Bagels in Teaneck, New Jersey. I do not think I can do justice to describing these bagels. They are perfect in every way. They made me cry. I will never be this good.

That took a while! Let's move on to the bagels I actually made. For this assignment, I made 4 slightly different bagels over a period of 3 weeks. The first batch was 50% hydration with 3% salt, 3% sugar, and 1.2% diastatic malt. The second batch used 3% salt, 5% sugar and no diastatic malt. The third and fourth batches used 2.15% salt; one had 5% sugar and no diastatic malt, and the other had 4% sugar and 1% diastatic malt. Here are my results from the first batch. Here is a picture of me with one of my bagels, in case it is somehow still in doubt that I made them. Here is one from the second batch. Here are some pictures from the third and fourth batches. I am currently working on tweaking this recipe, written by me, which I got from some guy on Reddit who makes bagels professionally in Nashville, who in turn got it from a James Beard award-winning chef in Philadelphia. (He won't get more specific than that.)

I still used malt syrup in the boiling liquid, so I think that brings us to exactly 5 ingredients: high-gluten flour, diastatic malt powder, barley malt syrup, brown sugar, and instant yeast. Hm. Let's say cream cheese is also an ingredient. I broadly followed my own instructions, but lately I've been mixing everything together all at once rather than adding the salt later. I'm also letting the dough "autolyse" for 20-30 minutes as opposed to the full hour. These changes result in no appreciable difference, as far as I can tell.

As I learned in Bread Science, the bottleneck of fermentation in bread is usually maltose, which takes longer to be digested by the enzymes in yeast than anything else. Diastatic malt powder contains enzymes that are very good at breaking down maltose, thus expediating fermentation. These bagels rested, shaped, at room temperature, for between 1 and 2 hours, until they passed the float test; they were then retarded in my refrigerator until the next morning, for a total fermentation time of between 11 and 14 hours.

At this stage, my goals are to practice speed and consistency, and get the flavor of the dough "right". I don't want to be too precious with the dough: I want to be able to mix it up fast and shape it fast, and only recently do I feel I'm achieving that. All the bagels I made were around 140g and came out as a nice, smooth ring with a hole that closed almost entirely once baked. A challenge with shaping the bagels is that the gluten will seize up the more you work it: in the past, I've had issues where my initial bagels roll out nicely, but as my remaining dough gets smaller, I have to roll it out more or cobble 140g pieces together from multiple smaller bits, and the bagels don't look as nice. I've managed to ameliorate that by shaping the dough into a long loaf, cutting off strips, and working fast. An important skill is learning to slice 140g strips off the loaf, as trying to stick excess back onto the loaf or work a supplemental bit of dough onto a strip will contribute to the dough seizing faster.

When I was in New York and New Jersey this summer, I asked all the bagel shops I was impressed with a bunch of invasive questions about their process, and most of the time they answered me. (Obviously, no-one would give me their recipe.) A commonality was boiling time. Most widely-available bagel recipes suggest boiling bagels anywhere from 30 seconds to 2 minutes per side, and this is horrible advice for many reasons. It sucks moisture out of the bagels; it results in a very chewy crust; it gelatinizes the starch on the exterior of the bagel to a degree that inhibits the bagel's rise in the oven, whereas a shorter boil will not fully "set" the exterior of the bagel. Perhaps most importantly, you want to manage your yeast activation wisely. Heat will activate yeast, resulting in the bagel "puffing": boiled bagels will appear larger than unboiled bagels. However, you really want most of the yeast to activate in the oven, not the water bath. The oven is much hotter, and the bagel will rise much more in that environment; by boiling bagels 2 minutes per side, you all but guarantee small, flat bagels. 20-30 seconds total boiling time is sufficient.

Anyway, let's move on to my evaluation of these particular bagels. Overall, I am happiest with the crumb of the first batch, the exterior of the second batch, and the flavor of the third and fourth batches, which is kind of frustrating. The bagels with a lower salt content taste more "balanced", but I can't tell a difference in taste between those made with diastatic malt and those without; mainly, it seems to shave some time off the proofing window.

I make bagels every week for my lab, so I served these with some Philadelphia cream cheese and coffee, which is classic. I buy the cream cheese in blocks and whip it myself because non-whipped cream cheese is too dense, but the stuff they sell pre-whipped is too whipped. (I know I'm a perfectionist.) Sometimes, like here, I'll whip sliced scallions or roasted blueberries into the cream cheese; for the third and fourth batches, I did scallion. I wish I could serve them with lox, but fish in the lab seems difficult to manage.

To conclude: I will be making this recipe again, every week, until I die or move someplace with good bagels.