

Joining the Stay-at-Home Bread Boom? Science Has Some Advice

 [wired.com/story/bread-boom-science-stephen-jones/](https://www.wired.com/story/bread-boom-science-stephen-jones/)

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Bread is on the rise. The number of people Googling “bread” hit an all-time high this week. Instagrammers and Twitterers alike are rolling in dough—not figuratively, but literally—and bread-making has become such a popular activity during this incredibly stressful time of coronavirus self-quarantining that grocery stores are running low on flour and yeast.

None of this surprises Stephen Jones. Jones is a wheat breeder and the director of Washington State University’s Bread Lab, located about six hours north of WSU’s campus. Jones and his team conduct research on thousands of kinds of wheat and grain to help farmers and processors decide what crops will perform best. As you might expect, Jones’ team also bakes a lot of bread in the lab’s kitchen—which they’re still doing, though in staggered shifts, he notes, to avoid contact with one another.

WIRED caught up with Jones by phone to talk about why we turn to bread-making in times of calamity (aside from the rather obvious fact that it feeds us), the spiritual element of baking bread, why you shouldn't strive for the "Instagram bread loaf," and how the consolidation of US flour mills over the years has contributed to the current shortage of staples.

The conversation has been edited and condensed for clarity and length.

Lauren Goode: We've interviewed you before at WIRED, but you run something called the Bread Lab. So for people who haven't heard of it before, explain what it is exactly that you do.

Stephen Jones: We're wheat breeders first, so we work for the farmers. We try to find wheats that will yield well for them and that we can use in 100-percent whole wheat situations. Then we figured out that we needed a laboratory so we could bake things ourselves, with our own students and maybe visiting bakers, to find out the best use for these. We're completely out of the commodity system, and to do that you need your own laboratory to find out the best use [for the wheats], whether it's a soft sandwich bread, or a baguette or a pizza dough, or flatbread, or cookie or scone, or whatever. So that's kind of what we do. We work nationally and globally with people that have lost their regional grain system.

How has Covid-19 affected what you're currently working on in the lab?

Well, it's done a few things. It certainly has demonstrated something that we've been working on for many years, which is the food sovereignty end of it. The fact is that in this nation we went from about 25,000 flour mills a little over 100 years ago to 163 today. Twenty of those produce about 95 percent of the flour in this country. Right now you can't buy flour in our area except for the fact that there are two mid-sized flour mills that have started up that are selling it. Otherwise we wouldn't have flour here. So what we noticed right away is how fragile our food systems are.

We knew our food systems were screwed up, in terms of what the emphasis was on—getting things first as cheaply as you can and then selling them for as much as you can, and not looking at flavor and nutrition. We also had a hint that the system was quite fragile, in that if you can't get shipments in or you're having some kind of pricing issue, you're out of flour. But literally overnight here all the stores were out of flour and yeast and salt and things like that, that you would need to make breads. That's not just true here, it's true in other areas [too].

So people are baking a lot of bread right now. Does this surprise you in any way?

It does and it doesn't. What we do, prior to all this, what we do is help people sort of rediscover that they can bake. We do that in various ways, but one way is when people

come through the labs or we have casual workshops, the first thing we do is encourage people to take the pressure off of themselves. This Instagram bread loaf, you know, the one with the big open crumb, is really not that desirable anyway. It's not something to shoot for. So—

I just want to make sure I understand. When you say the “Instagram bread loaf” is not something to shoot for, can you explain that?

Well it's open crumb, so it's—it's called the Hairy Forearm Crumb Shot.

[Laughs]

It's somebody holding up a rustic loaf that's been cut in half and has these huge bubbles in it and things like that. People think if they can't do that, they're failing at baking. It's part of this notion that your bread has to look perfect to be good, right? People should take pressure off themselves in that way.

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It doesn't surprise me in this environment that people are baking, because they need to and they want to. But I think an important part too is how little time it takes to bake a loaf of bread. Not totally, but in terms of the work that's required when you're actually working on the bread, that can be about 20 minutes. Even if you're doing a long ferment, and it goes for a full day and then you bake it ... including prep and folding and cleanup, you're talking about 20 minutes out of your day. The rest of the time is waiting.

You know, I've had three people over the years send me handwritten letters saying that, because they came to the lab and visited us, they started baking bread again or just baking in general, and that it helped them through the grief of losing a child. I think that just the fact that bread is alive ... you know, cookies aren't cookie dough, it never is, right? But a bread, it's that feeling and it's that becoming—not to get all foofy, but you become one with this thing, and that's what really good bakers or people who are really into baking feel. They get that feeling when they're baking bread. It's quite—if not spiritual, it's pretty close to it.

That's really powerful. Does this current trend mirror anything you've seen before in other countries or even in the United States during times of crises?

I was thinking about this before you called. The best example that I have, and I think it's a very beautiful one, is Doris Grant in England in World War II. She devised the Grant Loaf. Have you heard of this? It's on [our Instagram site](#) ... you'll see an orange book called *Your Daily Bread*, and it was written during World War II. She was an uncredentialed food scientist, so the food industry just hated her with a passion. They gave her grief for decades.

But during World War II she was a big whole grain advocate, which we are as well. She developed a loaf of bread called the Grant Loaf, and from mix, from dry flour to out of the oven, is less than an hour and a half. And she did that to make it easy for people cooking at home during the war to have fresh bread every day. It was a hundred percent whole wheat. It was not kneaded; she was the pioneer of the no-knead bread. Right now everybody's becoming famous for doing no-knead bread. She did it in the '40s. So that's one example.

Stephen, how do you think this, and by this I mean the time of coronavirus, how might this affect the genetics of wheat in the future?

I think one outcome could be that we regionalize or re-decentralize that part of our food system. So I think wheat is probably the best example of this hyper-centralization of a food, right? As I said we went from 25,000 mills to just over 160 mills. We just centralized farming everywhere, and it's not an exaggeration. Basically, any place in this country had wheat at one time. It had grains and it had a malt house and a mill and a bakery. Much of that is gone, and much of that could come back, but the way that it would come back in a mature way is if it didn't price people within the community out of those products. So we don't favor a niche or boutique style of bread or flour, but we do favor a regional or more local system. It should be priced where most or everyone in our community can afford it.

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So to get back to our main job, as plant breeders, we work on the yield going up for the farmer, which brings the price point down. We don't do GMO. We don't tie up intellectual property. We favor organic. So we do yield, but we do it in what we think is a responsible manner. We work on breads that 98 percent of our communities associate with bread, which is soft and squishy and sliced as opposed to a "rustic cool" tartine loaf. We can do that, but we're more into an approachable, affordable loaf of bread. We don't work on breads that are going to sell for \$14, we're interested in ones that are \$6 or less, maybe \$4. It's a movement we were working on before the current disruption, and it's one that we'll continue with.

This has been an illuminating conversation, and I have to say out of all the conversations I've been having lately this is one of the more delightful ones. One thing I wanted to ask you before you go is whether you have any quick bread-making tips you might share. Also, if you have advice for people who are trying to buy flour right now and can't buy flour. What do you think supplies will be like in a week or so?

There are a lot of nice resources online for how to get a good bread. I would encourage people to do sourdough. I was talking to somebody today that said, "There's no yeast in the store." You can start a sourdough culture in just a couple days. I mean, you just basically mix flour and water and let it sit there, and the bacteria and yeast will come to it. So that's a nice experiment. We have a [book called *Bread Lab*](#); it's a children's book that was written by Kim

Binczewski and Bethany Econopouly from the lab. It's about Iris, a 10-year-old girl, and her aunt Mary, and they do exactly what people could be doing at home right now. They start a sourdough starter, and they make whole wheat bread, and they talk about the science of it and things like that. And people always say, "Oh I killed my starter ..." It's *really* hard to kill a starter, so I'll just say that it may appear dead, but it's probably not. It'll come back.

[Regarding the flour], I think the logistics of it is the problem now. I think there's plenty of flour; I think it's just logistically getting it to the stores and going from there. I don't think that will be long-lived. There are areas of the country that have it available, through these new regional mills. The longer-term idea would be for folks to get a little mill at home. It's easier to buy and store wheat, it's actually quite economical. I mean, you can buy a hundred pounds of wheat for \$15. And then mill it on demand. So that's one thing to think about, but I bet little flour mills will be hard to get soon, too.