

Dan Barber & the Lost Flavor of Wheat

Gastronomy's prominent assumption in popular culture has caused chefs to realize that it is no longer enough for them to roll out their own pasta or even bake their own bread. In pursuit of perfection, they have recently taken their obsessive quest for flavor one step further, by turning to freshly milled whole wheat flour. While this may seem unworthy of being "on some exciting culinary frontier," consider that, globally, an estimated 4.5 billion people eat some form of this staple crop every day.¹

In the U.S., these amber waves of grain cover fifteen percent of all farmland, a number which puts to shame the mere three percent of land devoted to fruits and vegetables.² Despite its smaller size, this three percent produces the items most coveted by consumers at farmers' markets. Yet, when it comes to wheat, "we have somehow convinced ourselves that it is okay to cook and bake with what is essentially rotten produce."³ Not only is most of the wheat basically dead because of the extensive bleaching process it undergoes to render it shelf-stable, but the same modern varieties of nameless and homogenous wheat are grown in nutrient-starved soils, thereby requiring the addition of chemical fertilizers and unreasonable amounts of water to help them grow, demonstrating that the entire system is inherently unsustainable.⁴

¹ Dan Barber, "The Taste of Wheat: Dan Barber at MAD2," *MAD Symposium* (September 10, 2012), <http://www.madfeed.co/video/the-taste-of-wheat/>.

² United States Department of Agriculture, "Farms and Farmland: Numbers, Acreage, Ownership, and Use," *2012 Census of Agriculture Highlights* (September, 2014), http://www.agcensus.usda.gov/Publication/2012Online_Resources/Highlights/Farms_and_Farmland/Highlights_Farms_and_Farmland.pdf.

³ Barber, "The Taste of Wheat."

⁴ Verlyn Klinkenborg, "Did Farmers of the Past Know More Than We Do?" *New York Times* (November 3, 2012), <http://www.nytimes.com/2012/11/04/opinion/sunday/crop-rotation-and-the-future-of-farming.html>.

From a flavor standpoint, Chef Dan Barber compares cooking with such wheat to “trying to build a delicious menu around these ingredients.”⁵ It seems that as society has steadily grown more distant from its food supply, it has become apathetic to food’s taste and traditions, and is now simply viewing food as fuel, something Barber believes to be “a dangerous concept. [But] that’s where we are right now—food as fuel. It’s why nothing tastes good, and why our farm systems are collapsing.”⁶ The growing of wheat reflects this: whereas it was once bred for flavor, it is now solely bred for efficiency and convenience.

Barber, executive chef of the critically acclaimed Blue Hill at Stone Barns restaurant in New York’s Hudson Valley, has devoted much of his culinary expertise to reclaiming the lost flavor of wheat. He is not a typical chef, as his restaurant is part of an 80 acre working farm known as the Stone Barns Center for Food and Agriculture, which grows over 200 varieties of produce year round, and is home to an array of pastured animals.⁷ Such a closed system has given Barber near complete control of his restaurant’s food supply, and has earned him numerous accolades and awards, allowing him to become one of the world’s most influential chefs.⁸

His fame has provided him with the platform to: speak at several TED Talks and other symposia, earn James Beard awards and a spot on the San Pellegrino list, his own episode of Netflix’s *Chef’s Table*, and the opportunity to publish *The Third Plate: Field*

⁵ Barber, “The Taste of Wheat.”

⁶ Dan Barber, *The Third Plate: Field Notes on the Future of Food* (New York, N.Y.: Penguin Press, 2014), 380.

⁷ Stone Barns Center for Food and Agriculture, “How we Farm,” 2015, <http://www.stonebarnscenter.org/farm/how-we-farm.html>.

⁸ Emily DeNitto, “Turning Bounty into a Bespoke Meal: A Review of Blue Hill at Stone Barns, in Pontico Hills,” *New York Times* (August 15, 2014), <http://www.nytimes.com/2014/08/17/nyregion/a-review-of-blue-hill-at-stone-barns-in-pocantico-hills.html>; and The World’s 50 Best Restaurants, “No. 49: Blue Hill at Stone Barns, Pontico Hills, USA,” 2015, <http://www.theworlds50best.com/list/1-50-winners/Blue-Hill-at-Stone-Barns>.

*Notes on the Future of Food.*⁹ In this manifesto, Barber encourages farmers to grow delicious and nutritious varieties of wheat, which promote healthy soil and sustainable farming practices. He sees the mere growing of this crop as a path to revitalizing local mills and bakeries, demonstrating that an ingredient as simple as a grain can influence meaningful change. Barber's interest in wheat made sense given its prevalence in most kitchens, but it was his sudden realization of its poor quality that motivated him to tackle the problem.¹⁰ In viewing chefs as advocates for flavor, he believes that they "have an opportunity—and perhaps the responsibility—to use their cooking to shape culture, to manifest what's possible, and in doing so, to inspire a new ethic of eating."¹¹ Barber considers chefs to be ambassadors for change who possess the ability to reshape the food landscape and redefine appetites from the ground up, not just by inspiring consumers to try new varieties of produce, but by changing the way in which they are grown.¹² This paper will discuss Chef Barber and his own variety of wheat, and the impact his grain revival has had on altering local food cultures. By using his celebrity status as a chef to encourage small farms and bakeries to prioritize flavor, Barber has shown he possesses the means to influence dietary changes while simultaneously educating his clientele and supporters about nutrition, ecology, culture, and most importantly, flavorful foods.

⁹ For more, see: Dan Barber, "How I Fell in Love with a Fish," *TED Talk* (February, 2010), https://www.ted.com/talks/dan_barber_how_i_fell_in_love_with_a_fish?language=en; Dan Barber, "A Foie Gras Parable," *TED Talk* (July, 2008), https://www.ted.com/talks/dan_barber_s_surprising_foie_gras_parable?language=en; "Dan Barber with Ira Glass: Beyond Farm-to-Table- A New Food Revolution," *92Y* (June 12, 2014), <https://youtube.com/watch?v=w0nak0fsQIM>; Barber, "The Taste of Wheat," James Beard Foundation, "Winners of the 2015 James Beard Awards," May 4, 2015, <http://www.jamesbeard.org/blog/2015-james-beard-award-winners>; The World's 50 Best Restaurants, "No. 49;" and Clay Jeter, "Dan Barber," *Chef's Table* s. 1, ep. 2 (February 12, 2015), Netflix, <https://www.netflix.com/title/80007945>.

¹⁰ Barber, "The Taste of Wheat."

¹¹ Barber, *The Third Plate*, 305.

¹² Barber, "The Taste of Wheat."

For the last 9,000 years, wheat has been a staple crop for many cultures, not only for the value of the grain itself, but also for its straw, which could be used as thatch, fodder, fuel, bedding, among other possibilities.¹³ It was “a community builder, a grain whose benefits were reaped only through cooperation and effective social organization—farmers grew it, millers ground it, and bakers turned it into sustenance and pleasure.”¹⁴ Farmers consistently produced delicious wheat by saving seeds that would be used in subsequent sowings, as these seeds had already proven to be well-adapted to their local climates with good pest resistance and great flavor. Furthermore, by growing it within a careful crop rotation system that was ecologically sensible and beneficial, it would “disrupt disease cycles and return nutrients to the soil,” ultimately producing more nutrient-rich plants and providing the opportunity to plant a wider variety of crops.¹⁵ The millers then ground the wheat kernels whole, utilizing all three of the grain's main components: “a fibrous and nutrient-rich outer coating called the bran; the flavorful and aromatic germ, [...]; and a pouch of starch known as the endosperm;” all of which was mashed together during grinding, thereby preserving its nutritional content, while simultaneously creating a broad spectrum of complex flavors and aromas that were unique to each crop, allowing bakers to create exquisite breads.¹⁶ However, once industrial farming took over, many of these heirloom—or landrace—varietals disappeared, as companies became better equipped to more efficiently and cheaply process the grain.¹⁷ Now, farmers are “producing grain strictly as commodity, [with] no

¹³ Anson Mills, “What you need to know about Wheat,” 2015, http://www.ansonmills.com/grain_notes/14.

¹⁴ Barber, *The Third Plate*, 34.

¹⁵ *Ibid.*, 247; Klinkenborg, “Did Farmers of the Past Know More Than We Do?”; and Stone Barns Center for Food and Agriculture, “How we Farm.”

¹⁶ *Ibid.*

¹⁷ Mills, “What you need to know about Wheat.”

more cultural heritage attached to it,” and consumers have since become accustomed to wheat that produces “nutrient-poor flour, and insipid, spongy breads.”¹⁸ Two stories ultimately contributed to the death of landrace wheat and had disastrous implications for its flavor: one being a scientist's desire to feed the world, and the other being the industrialization of grain mills.

In the late 1950s, parts of the world faced massive starvation, and a scientist by the name of Dr. Norman Borlaug believed this needed fixing. Seeing that the global market was desperate for grain, he encouraged farmers to “plant wall to wall harvests of wheat.”¹⁹ This large-scale shift to the monoculturation of farming had horrible consequences for the local ecology, as the valuable system of crop rotations was abandoned, much of the soil was quickly denuded. To address this problem, Borlaug created a cocktail of nitrogen, phosphorous, and potassium to feed the plants their most basic foods. Essentially, he was bypassing the entire periodic table and “substituting a few soluble elements for an entire living system,” a mentality Barber likens to “thinking that an intravenous needle can administer a delicious meal.”²⁰ Borlaug's ‘steroids’ ultimately caused wheat stalks to shoot up with heavy seed heads, because without the requisite time and array of nutrients to grow into healthy and mature plants, the stalks were not strong enough to hold the heavy heads and the plants kept falling over, making harvests next to impossible.²¹ To fix his latest dilemma, Borlaug created a semi-dwarf variety that had good resistance to pests and disease, and had such enormous yields that

¹⁸ Barber, *The Third Plate*, 377; and Ferris Jabr, “Bread is Broken,” *New York Times* (October 29, 2015), <http://www.nytimes.com/2015/11/01/magazine/bread-is-broken.html?smid=fb-share>.

¹⁹ Barber, “The Taste of Wheat.”

²⁰ Ibid.

²¹ Ibid.

harvests nearly tripled in size within ten years.²² Undoubtedly, this “altered the way we grow food on a large scale, [as] the world is now awash in monocultures of genetically uniform varieties, fed by chemical fertilizers.”²³ But even if Borlaug had managed to grow tasty wheat, industrial milling practices would have ensured its demise.

Now that wheat for flour could be quickly and cheaply grown, large food companies were quick to adopt better technology that essentially turned their factories into “abattoirs for wheat.”²⁴ Here, a process using roller mills rolls the outer bran layer off the kernel, removes the germ, and grinds the remaining endosperm into white flour, which then undergoes a kilning process to dry it out and prevent spoilage. It is worth noting that even if heritage varieties had remained popular, they would not have conformed to the characteristics required for industrial milling; meaning that farmers who still grow landrace wheat as part of their crop rotations do so at a financial loss, as there is no market for their non-uniform grain, they can only sell it as cheap cattle feed or plow it back into the field.²⁵

The result of this industrial “mummification” process strips most of the flavor from the wheat, and allows companies to “create ultra-processed, refined flour, [that is] drop-dead consistent for baking, and totally stable for distribution and storage.”²⁶ While the uniformity of such flour is admittedly useful for commercial bakeries and restaurants, it means that only six percent of all flour produced in the U.S. is truly whole wheat, a sad figure given how much flour is used every day.²⁷ As a means of recuperating much of the

²²Ibid.; and Barber, *The Third Plate*, 27.

²³ Ibid., 364.

²⁴ Ibid., 374.

²⁵ Mills, “What you need to know about Wheat.”

²⁶ Ibid.

²⁷ Klinkenborg, “Did Farmers of the Past Know More Than We Do?”

social, cultural, nutritive, and flavorful aspects of what used to be associated with wheat, Barber set out on a crusade to resurrect and restore its terroir, and introduce his diners to “the idea of wheat having taste and flavor,” a foreign concept to many.²⁸

Barber's mission was simple, he only wanted to track down old and delicious varieties, which proved more difficult than he had anticipated, as Borlaug's variety had successfully conquered much of the globe. It was not until a trip to a small town in Spain that he discovered a variety of wheat known as Aragon 03, which was of such high quality that the town refused to grow anything else, because over the years it had developed good resistance to pests, provided good yields, and had an outstanding flavor.²⁹ Barber brought some kernels back to his farm for planting, where he realized that “heirloom foods may be what we think of as the gold standard, grown before the era of industrial farming, but [they] are frozen in time and thus frequently unsuited to current soil and climate conditions.”³⁰ So much effort had gone into finding this landrace wheat that Barber forgot to consider that his Spanish varietal might be unfit for the Hudson Valley's climate.

In order to address this issue, Barber contacted Dr. Steve Jones—seen here on the bottom left—head of the now famous Bread Lab at Washington State University, a research center renowned for its devotion of taking old world techniques and marrying them with modern technology to breed new, artisanal varieties of landrace wheat.³¹ Barber challenged Jones to “breed a delicious wheat that was nutritious, that had good

²⁸ Barber, “The Taste of Wheat.”

²⁹ Ibid.

³⁰ Corby Kummer, “Food Networks: ‘The Tastemakers’ and ‘The Third Plate’,” *New York Times* (June 19, 2014), http://www.nytimes.com/2014/06/22/books/review/the-tastemakers-and-the-third-plate.html?_r=0.

³¹ Barber, “The Taste of Wheat.”

yield for the farmer, and that had good pest resistance.”³² Jones immediately accepted, and decided to breed Aragon 03 with “another variety to accentuate [its] characteristics [...] and make it better by marrying it to a local variety to ensure that those genetics carry on into the future,” ultimately creating what is now called Barber Wheat, a varietal perfectly adapted to the ecology and climate surrounding Blue Hill that still preserved the original characteristics of Aragon 03.³³

Barber mainly uses the flour from his wheat—milled in house—to bake into breads such as this one, which proves to be a pure way of allowing the wheat’s complex flavors and aromas to express themselves. After having had the opportunity to taste some of it, I can tell you that it makes a mockery of the stuff that permeates our supermarket shelves: Barber’s bread was utterly delicious and proves that wheat has as much potential for flavor as a tomato.

Apart from the bread, Barber Wheat is also used in many pastries and other baked goods that are sold at the Blue Hill’s newly created Grain Bar, a separate venue that Barber hopes will serve as an example for how the artisanal wheat industry can revitalize local communities. He believes that the key to this system is to start from the ground up, literally with the soil, where the driver for flavor lies, so he “encouraged farmers to improve their soil by creating a market for [...] grains that added fertility,” since “without a buyer, farmers can’t justify planting them into the rotations,” and “without planting them into the rotations, sooner or later soil fertility declines.”³⁴ Not only does this

³² Ibid.

³³ Ibid.

³⁴ Klinkenborg, “Did Farmers of the Past Know More Than We Do?”; and Barber, *The Third Plate*, 327.

promote sustainable farming practices, but with a new market for their product, farmers can actually turn a profit.

To do all this, Barber had to restructure the local supply and distribution network, starting with the farmers, who first had to be persuaded to grow the crop, “but in order to persuade [them, Barber] had to convince the bakers that they needed better wheat,” which required getting millers to purchase the heirloom grain and turn it into a product that is then sold to chefs and bakers, who are then entrusted to create something delicious with it.³⁵ This last part is essential, for as Barber rightly points out, “none of this will matter [...] if it isn't tethered to cuisine,” since the food chain is such that end-users will dictate what they want to purchase from the flour manufacturers, who in turn will tell their mills, and who in turn will tell their farmers.³⁶ And this is where Barber's philosophy of the chef as ambassador of change comes brilliantly into play, as he hopes that chefs and their use of such products will trickle-down and influence others to follow in their stead.

While there is reason to be skeptical of such trickle-down policies, the success of the partnership between Barber and the Bread Lab has inspired one of the country's largest fast-casual chains to change its own practices.³⁷ After a conversation with Barber and Jones, Chipotle's founder, Steve Ells, approached the Bread Lab to inquire about the possibility of a collaboration to “use regional wheats in its tortillas.”³⁸ While there are certainly issues of scale, considering that Chipotle uses nearly 800,000 tortillas a day, and that switching over to inconsistent regionally based wheats would mean that its tortillas across the country would vary in flavor, it would represent a significant shift in the status-

³⁵ Ibid., 418.

³⁶ Barber, “The Taste of Wheat.”

³⁷ Stephanie Strom, “Chipotle's Quest to Develop a Better Tortilla,” *New York Times* (June 15, 2015), <http://www.nytimes.com/2015/06/17/dining/chipotle-quest-to-develop-a-better-tortilla.html>.

³⁸ Jabr, “Bread is Broken.”

quo.³⁹ While access to such grains are “still quite sealed off from most of American society”—a true testament to industrial wheat’s ability to have so thoroughly obliterated its competition—if the partnership between the Bread Lab and Chipotle succeeds, “it will bring real whole wheat to more American plates than any other Bread Lab collaboration so far,” and will do so at a national level.⁴⁰ Admittedly, Barber’s distant utopic system faces numerous obstacles, but this first-of-its-kind partnership shows promise.

Since the late 1950s, industrial agriculture has been selectively breeding large, monoculture harvests of wheat for uniformity, high yields, and overall resistance to drought and disease; essentially breeding for efficiency and convenience rather than taste. As Barber aims to reverse this by prioritizing flavor, the chef is effectively making use of his celebrity status to help reclaim the lost flavor of wheat. And while such heirloom wheats will never replace their industrial counterpart, just think of what would happen if a mere five percent of those 47 million acres were switched to landrace wheats: it could benefit both the environment and our enjoyment of food.

³⁹ Ibid.

⁴⁰ Ibid.

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http://www.agcensus.usda.gov/Publication/2012Online_Resources/Highlights/Farms_and_Farmland/Highlights_Farms_and_Farmland.pdf.