

The Rewards of (Gluten) Intolerance

The Trouble with Bread

Beidelman, Maggie (dir.)

Bullfrog Films, 2013

The New Bread Basket: How the New Crop of Grain Growers, Plant Breeders, Millers, Maltsters, Bakers, Brewers, and Local Food Activists Are Redefining Our Daily Loaf

Amy Halloran

White River Junction, VT: Chelsea Green, 2015

246 pp. \$17.95 (paper)

Grain of Truth: The Real Case for and against Wheat and Gluten

Stephen Yafa

New York: Penguin Random House, 2015

304 pp. \$17.00 (paper)

It is not just food processors benefiting from the gluten-free hyper-trend: Journalists, writers, film-makers, lobbyists, retailers, family, and scientists have jumped on board to get to the bottom of, make us feel better (and worse) about, and personally gain from this perhaps not so out-of-control food movement. For the upside of this intense obsession is that it has aimed the spotlight on wheat, formerly just another mundane commodity crop, now magically transformed into something tragically hip.

Let us get this out of the way first: Only a small percentage of the population has an immune response to gluten. In *Grain of Truth*, Stephen Yafa teaches us that only 0.9% of the population has celiac disease and less than 0.5–1% has non-celiac gluten sensitivity. Additionally, only 1–6% has “trouble digesting gluten.” We do not provide these statistics to discount this group that suffers from a serious medical condition to a ubiquitous food ingredient, but to contrast it with the 30% of the U.S. population that admits to “cutting back on gluten,” according to Yafa. And contrary to new urban legends wheat has not been altered through breeding

into a form consistent with a correlation in increased allergenic epitopes (they are diverse and none have specifically been implicated in gluten intolerance) as Amy Halloran references in *The New Bread Basket*, nor has it been manipulated for an increase in gluten content as Yafa learns from wheat scientists like Donald Kasarda.

Has a quarter of the U.S. population been fooled by a \$15 billion push to endure the stressful task of avoiding gluten? Many explanations for the increase in self-reported gluten intolerance have been attempted. Some of those explanations, such as the use of transgenic technology (reviewed in the latest report from the National Academy of Sciences on GMOs, *Genetically Engineered Crops: Experiences and Prospects*, p. 144) and dwarf genes (“dwarfing genes are not on the same chromosome arms as the proteins” as explained by Robert Graybosch in *Grain of Truth*, pp. 96–100) have been demonstrated as inaccurate. Others, such as the strength of the placebo effect, an obsession with fad diets, marketing, an increase in human allergenicity, an increase in gluten exposure, non-gluten wheat components, and heavy consumption of processed foods are more likely leads. The use of glyphosate as a grain desiccant deserves objective scientific exploration, more so than Yafa is willing to entertain. By focusing on gluten, described as a scapegoat by Halloran, we avoid the strong possibility that the way many of us feel—bloated, forgetful, depressed, dumb, achy, and tired—is simply because we do not, and often cannot, lead healthy lives.

The blame for our gluten troubles has shifted away from gluten itself to the way the food industry has been treating wheat. According to gluten conspiracy theories food processors created a problem that gave them a new market to fill. This industrial model, built on a fear of gluten, created one more shelf of expensive products, 242% more expensive than their wheat counterparts, Yafa tells us. This recent change in perceived causality may demand that food processors actually fix the problem they created—or as Maggie Beidelman in her

film *The Trouble with Bread* puts it, not only fix it for those who can afford a loaf of long fermented craft bread as easily as they can a \$100 bottle of wine.

The problem, as argued by Yafa, Halloran, and Beidelman, is multifold and often confounding. Each uses gluten as a gateway to understanding wheat—what it is, was, and what it can be.

First on their fix-it list is the predominant consumption of highly refined white flour, devoid of micronutrients, fiber, and enzymes, including those that break down gluten, delivering starch at a high glycemic rate. The argument that white flour really is not that good for us is not new—like cicadas it seems to come along every seventeen years—nor is it (like cicadas) very controversial, except for the fact that we continue to produce and consume only white flour.

However, as the argument continues, whole wheat bread might not actually save us from our gluten misery, for “whole wheat” actually only has to be 51% whole wheat, and is probably loaded with added vital wheat gluten. Additionally, that 51% made of whole wheat flour still is not truly whole wheat; it is reconstituted by mixing white flour with bran, sometimes germ, after roller milling and separation, at a rate that seems similar to, but not really, whole flour milled by stone, burr, or hammer mills without sifting. Is this the cause of our gluten intolerance? If so, we are in trouble because only craft or home bakers, currently use “truly” whole wheat flour.

Lastly—we are told—we are all well on our way to becoming gluten intolerant because American bread is not long fermented. Long wild ferments, those used mostly, again, by craft bakers, provide pre-ferments for our own gut microflora, partially digest gluten, decrease glycemic index, and increase nutrient bioavailability. Wild fermentation may also be so powerful that it can transform refined flour into something that is now tolerable by the gluten intolerant, as implied during Beidelman’s visits to France and San Francisco, where the majority of bread is actually very white. This is great news for craft bakeries, France, and consumers who do not like whole wheat.

In the end, no author convinces us that gluten intolerance at the current self-reported level is not an artifact, or that their solutions will solve this problem. The solutions they provide—more whole wheat, less refinement, longer wild fermentations—are widely accepted as sound, but rarely taken, nutritional advice. Anecdotal evidence supplied to support their solutions suggests that some gluten intolerant can eat long fermented wheat, especially if vacationing in France. But many gluten intolerant cannot eat wheat no matter what form or from what country it originates. Contrary to claims made in the reviewed works, roller mills and short fermented white yeasted breads exist on a large scale in France, and is all that is found in many French bakeries

romanticized by Americans. So when Michael Pollan says, “it could still all be in your head” to situationally gluten intolerant Beidelman, we do not object.

Our trouble with bread is similar to Beidelman’s final statement: “I can’t help but think that what the industry has made cheap and accessible isn’t always the best for us. . .” It is not that gluten intolerance (or rather wheat nutrition) is or is not a problem (or trend) of the rich, as asked on film of researcher David Killilea. The trouble is that if gluten intolerance is indeed a widespread problem, as is wheat nutrition, not everyone can or will improve his or her situation. Our grain of truth is that even that pricey loaf of long fermented craft bread is still not whole wheat, or even close, and in many cases it is made from sifted unenriched white flour.

The questions for Halloran are: Can regional grain systems provide a solution to poor wheat nutrition? And can this movement do so while supporting farmers, rural communities, and a diversity of consumer types? As authors we are biased—we work on the regional grain economy in western Washington. However, between the two of us our bias has no directional force. Halloran does not give us answers, but a story of craft bakeries, millers, maltsters, distillers, brewers, marketers, distributors, and researchers involved in revitalizing regional grains nationwide for readers to develop their own conclusions. Importantly, her book also serves to give credit to many actors for their early vision and work, often unrecognized.

Working and living within rural communities, our effort in research and development works toward viability and health of the people, farms, and environment within the rural community. For farmers to earn money, conserve their land, and contribute to their local economy, they need consumer demand. The more consumers, the more opportunity to actually profit from producing grain, a crop with historically low margins. (The same can be said of labor-focused bakeries.) Rural depopulation and the limits imposed by confining a system to a particular geography necessitate incorporation of cities into the regional definition. In turn, cities depend upon rural areas to feed their populace. Cities don’t need to be excluded from the regional definition, but equity between and within rural and urban requires analysis.

For example, much of Halloran’s book focuses on the regional grain system in New York, which owes much of its success to farmers in rural areas and consumers in Manhattan, connected by numerous daily farmers’ markets organized by Greenmarket. When Greenmarket required bakers selling at farmers’ markets to use local grain, farmers found a new consumer base. But who is benefiting? How much of the economic and nutritional gains are retained within the rural community? How much of the value is exported to the city?

Halloran does question the impact of regional grain economies, specifically when discussing Skowhegan, Maine, home of the Maine Grain Alliance, the Kneading Conference, Somerset Grist Mill, and the many businesses that have emerged. Halloran thinks, yes, regional grains will have a lasting impact on the community. Surely regional grain production, infrastructure, and use has grown, and has impacted grains and their products, but how has the local grain movement impacted the larger rural challenges the region faces, referred to in her book as “poverty-stricken problems” (p. 82) of the “postindustrial” region (p. 76)? Our questioning is not necessarily a reflection of our disbelief, rather an acknowledgment of the exclusive tendency of local food movements.

Expanding upon the regional grain model to include the return of processing into the farming community, rather than dispersed elsewhere, seems a step in the right direction, as additional revenue can be maintained within the rural community. Milling, malting, brewing, distilling, and baking before the product is sold elsewhere can bring entrepreneurship, infrastructure, jobs, and even tourism to the community. An understanding of how much so will either bolster the model as a way to revitalize rural communities and support small to medium diverse farms, or expose it as a niche system supported by cities and benefitting few in the rural community. Even if the latter, the only other option for farmers is to sell their grain on the commodity market, where the reference cost for a bushel of wheat (sixty pounds of grain) is \$5.50, or the cost of one specialty coffee, or round-trip bus fare in Seattle—in other words, pocket change for many urbanites. That \$5–8 craft bread, containing only a couple pounds of grain, does not sound so expensive in comparison.

Point of reference often changes an argument. If we instead compare the 99-cent loaf of white sandwich bread shown in the moving grocery store scene in *The Trouble with Bread* to a \$5–8 loaf of craft bread, it is striking, especially since craft bread is still mostly white bread. Even \$3 whole wheat grocery store bread may be out of reach to those, urban or rural, without extra cash. But 99-cent bread, even when enriched, is void of fiber, and as Yafa reminds us, lacking “at least

15 vitamins and minerals” found in whole wheat (p. 87). Without a long acidic fermentation, many of those minerals, if there, are not bioavailable.

But say that craft bread is whole wheat—should our reference point for comparing a nutritional food, such as long fermented whole wheat bread, be 99-cent white bread meant only to keep people full and seemingly satisfied? The trouble with bread, as we have come to know it, but omitted by Yafa, Halloran, and Beidelman, is that many wages support workers only enough to buy food that is barely life sustaining. We cannot reconcile this artificially constructed trade-off between consumer pricing and farmer profit when embedded in a system based upon wages that are inadequate to meet human needs.

Independent of scale, viable and nutritious regional or global commodity grain systems each come with their own difficult challenges and trade-offs. What is a fair price for the farmer and the consumer? What is the cutoff point for adequate nutrition? The ideal is a food system that benefits farmers, environments, communities, and consumers with some level of equity. Can a regional grain system provide this? After reading the books and watching the film we’re still uncertain. This we know: Regional systems provide us with an opportunity to create change in our own communities. Those building and supporting these systems will determine the outcome—the type of bread produced and who and what will benefit. Just as gluten draws our attention to wheat, bread can draw our attention to the larger complexities of who creates, profits from, and gets to eat what, in our modern food system.

Bethany F. Econopouly is currently pursuing a Ph.D. in Crop Science at Washington State University, Mount Vernon. She has an M.S. in Plant Breeding & Genetics from Colorado State University. Stephen S. Jones is a Professor at Washington State University, Mount Vernon and runs The Bread Lab.

The Bread Lab, Washington State University, Mount Vernon
11768 Westar Lane, Burlington, WA 98233
bethany.econopouly@wsu.edu