
Give Us Our Daily Bread, but Please Stop Genetically Modifying the Yeast
Hatchard Report
Dr. Guy Hatchard

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There is a poem written by Harry Baker

If ever I die and thee be not sure that I'm dead

Just put butter and jam on fresh baked bread

Then wave them vittles over me head

If my mouth don't open, thee be sure that I'm dead

Appreciation of bread is a universal language. Cultures all over the world have their favourites—wholewheat, pita, lavash, chapati, sourdough, corn bread, pumpernickel, baguette. The list is long and people are very protective of their traditions and tastes.

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What is happening to bread today?

There are pure food laws in the EU designed to protect traditional recipes, ingredients and their names. Back in 2018 a study entitled "Impact of Saccharomyces cerevisiae [naturally occurring yeast] metabolites produced during fermentation on bread quality parameters: A review" reported that baker's yeast was not genetically modified saying *"due to the fact that the majority of consumers in Europe highly reject the use of genetically modified microorganisms in the production of food, other strategies to improve bread quality must be investigated."*

Eight years later, if you ask Google today *'Is yeast free of GM ingredients?'*, it will answer in the affirmative and refer you to the 2018 study. Whew! So why did I get a headache when I ate too many slices of toast for breakfast?

To get around the need to convince consumers that their bread was still pure and traditional. Bakers began a tradition of *'flour improvers'*. I say *'bakers'*, but I don't actually mean bakers, I should have said *chemists and biotechnologists* because they are the ones designing our daily bread. (Just in passing, I wonder if we would trust the person who empties our septic tank to make our wedding cake?) These are lauded in PR blurbs *as ingenious people who come up with creative solutions to problems* (that don't actually exist).

So-called flour improvers contain a cocktail of enzymes, oxidants, reducing agents, bleaching agents, emulsifiers and additives, many, if not most of which, are produced by batch fermentation processes using genetically modified microorganisms (GMMs). Flour improvers contain:

amylases, hemicellulases, transglutaminases, pentosanases, proteases, mono- and diglycerides, ascorbic acid, potassium bromate, benzoyl peroxide, chloride di-oxide, potassium iodate, chlorine, azodicarbonamide, L-cysteine hydrochloride, sodium metabisulphite, lipophilic glyceryl monostearate, sodium stearoyl lactylate, diacetyl tartaric acid esters of mono- and diglycerides, lecithin, lipoxygenase, xylanase, guar and xanthan gum, calcium propionate, acetic acid, vinegar, butylated hydroxyanisole, propylene glycol, tert-butylhydroquinone, aspartame, acesulfame potassium, sucralose, hydroxypropyl methyl cellulose, sodium erythorbate and polyglycerol esters, along with so-called fortification additives including ferrous sulphate, calcium carbonate, zinc sulphate, thiamine hydrochloride, riboflavin, nicotinic acid, folic acid and vitamin A acetate.

This is not even a comprehensive list, I forgot to mention the agrochemical residues for example, but they are all permitted by the authorities supposed to be protecting our health who allow most of them to be lumped together on the label under the title *'flour improvers'*??? Their actual purpose is to ensure that supermarket bread can be produced uniformly and continuously in super quick time yet last the distance for long periods in a plastic bag at room temperature, all achieved using the cheapest possible ingredients through industrial scale mechanised processes.

If you bake sourdough at home you will know that none of these ingredients are necessary for a successful product, although a little bit of practice and knowledge goes a long way.

The effect of this chemical cocktail on the consumer is really of little interest to those producing the bread. Many years ago I had a meeting with the CEO of one of New Zealand's biggest bread makers, I was urging him to restart production of their discontinued organic bread line. He replied that consumers were not interested enough, and then confided in me that he never ate his company's bread, he only bought artisan sourdough for home consumption. Seeing the above list of ingredients, I can see why:)

However, this does not stop the people responsible for marketing bread showing pictures of golden wheat blowing in the wind and basking in the sunshine along with made up stories about the miraculous health benefits of bread (if only it actually deserved the name bread) and yeast. A Stuff newspaper report quotes Ralph Thorogood, chairman of the Baking Industry Research Trust which represents the only two big companies making bread in New Zealand (both owned by overseas interests), argues that in principle commercial bakers don't do anything different to what an artisan baker does saying:

"*Weighing up our ingredients, we mix them together in a large scale mixer the same as the craft bakery does. We take that dough and divide it into individual pieces. The craft baker does it by hand on a divider."* Yeah Right!!

Yeast is not what we are told it is

With those words of commercial wisdom, let us return to yeast itself. Over the years, our universities have trained a great many biotechnologists. These people all need a crust to live on and something to do with their lives. Stymied by the consumer preference in Europe for natural yeast, they worked with the marketing gurus to come up with an acceptable work around. Enter stage left *'self cloned'* yeast, a term which was judged to be potentially acceptable to consumers, or rather might deceive them. Self cloned yeast is just genetically modified yeast with a deceptive name. It is widely used in bread making today and is rapidly replacing natural yeast. Of course the obliging regulators decided it doesn't need to be identified as Genetically Modified (GM), after all it has a pretty enough name, no need to confuse fussy consumers. In the end the labels just say *'yeast'*.

Our article "Major Health Alert: the Extraordinary Genetically Modified Invasion of Our Supermarkets by Stealth" explains that all of the genetically modified processes which produce the multitude of ingredients in bread have one very concerning and scientifically verified problem—genetic contamination with DNA fragments that can take control of our physiological processes and potentially give us a headache and much worse.

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So we have arrived at a crisis. The supermarket plastic fantastic loaf is off the table and that little packet of yeast we buy at the supermarket to put in our healthy bread maker at home is actually not healthy at all nor apparently only yeast nor even what we formerly called yeast. The answer lies in expensive artisan breads for those who can afford them, home made sourdough for those with the time, or with chapatis—unleavened breads you can make at home in ten minutes (not the store bought wraps or chapatis).

I know that this is all very challenging, depressing even, especially for busy people and families, but it is nonetheless happening to us. It is as if we have suddenly discovered that our familiar friends, upon whom we rely, are not our friends at all. Bread is just one example among thousands of convenience foods and drinks whose production processes are being genetically redesigned by biotechnologists and then deceptively marketed as *'healthy, natural, precise, nourishing, and beneficial'* (poison, dare I say it).

Our digestive processes, our liver, our kidneys have to deal with the fallout everyday, but there are aspects of DNA contamination which can't be easily managed. This puts a strain on our capacity to maintain optimum health. It can seriously degrade health. Multiple studies that we have often reported over the last few years point to an association between processed food consumption, chronic illness and cancer—conditions whose incidence is accelerating. So far the processed food industry has been hiding behind the complexity of the food chain, saying that there is no proven causation. This is a convenient cover for their lack of honesty, integrity, and disregard for consumer health, involving deceptive labelling, secretive changes to traditional foods and now genetic engineering of ingredients and processes.

The government is trying to pass the Gene Technology Bill which will remove GM labelling requirements, grant immunity from criminal responsibility, do away with any need for testing and encourage genetic experimentation with our food. A sort of harakiri for our traditional foods. Now is the time to speak up. Contact your local MP. Call for the Bill to be withdrawn. Call for all GM ingredients to be identified on labels. Call for an end to risky biotechnology experimentation. Call your supermarket. Don't buy these unlabelled GM contaminated items and tell them why. Tell them to get different suppliers and different goods. We as consumers have a lot more power than we realise.

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