

Written for the Daily Mail by Andrew Whitley, 21 July 2010

Fresh bread – you can't beat it. House sellers let its aroma do the talking. Supermarkets waft baking smells round the store to whet appetites and loosen pursestrings. But a recent ruling by the Advertising Standards Authority suggests that what you smell is not necessarily what you get. Tesco's claim in a full page Sunday paper advert that 'every single loaf' of 'fresh bread, baked from scratch in our instore bakery...is genuinely British' has been judged to be misleading. It turns out that in a majority of its stores, the bread isn't *fresh* at all – at least not in the sense of 'just baked' that most people would understand the word. It's been cooked days or weeks before in a factory miles away and sent (often frozen) to be re-heated in an instore 'bakery'. A rather un-British deception, you may think.

But it doesn't stop there. Our daily supermarket bread is full of hidden secrets. If you've ever wondered why some loaves turn dry as dust overnight while others stay squashy for ages and then suddenly go mouldy, or why so many people complain of bloating (or worse) when they eat bread, don't expect to find any answers in Tesco's labelling or advertising. Pork pies, maybe. But the truth is that most British bread harbours a host of adulterants and has done for decades. And many of the most potent are not even declared on the label.

I got so fed up with the pappy texture, bland flavour and vacuous nutritional quality of industrial bread that I started making my own in the 1970s. Turning flour, water, yeast and salt into tasty loaves was extraordinarily satisfying. So I quit my London job and opened a bakery in a barn in Cumbria. I turned English wheat, ripened by the hot summer of 1976 and ground by a local watermill, into simple wholemeal loaves, baked in a brick oven. This was really fresh bread made from 'British flour'. Over thirty years later, Tesco caught up, but turned out mendacious marketing rather than honest-to-goodness loaves.

My Village Bakery wasn't going to feed the world, of course. In fact, even my hopes of earning a crust by supplying nearby residents proved rather optimistic: demand for whole grains and organic artisan baking made its way rather sedately to the North Pennines. But in the early 1990s, something very odd happened.

I revisited Russia at a time of historic change (I had worked in the BBC Russian Service) and came home inspired to add rye bread to my repertoire. I even brought a little lump of 'sourdough' to start the process of natural fermentation without added yeast. What I imagined would be, at best, a niche product, in fact put the Village Bakery on the map. Thousands of customers appeared, as if from nowhere, saying that they could eat my 'naturally leavened' breads without the bloating and other

ill effects that shop bread had started to cause them. Perhaps it was the absence of bakers' yeast, or wheat gluten, or both. Or maybe it was the flour. Or the fact that I had never used any additives. Or the way I made my bread...

As my production doubled and re-doubled, I asked myself why a small bakery that had made quite ordinary breads for fourteen years or so should suddenly be inundated by demand for a decidedly minority product. Had I stumbled on a recipe that the big boys didn't know about? What was it about their bread that was sitting ever less easily on the nation's stomach? What I found out appalled me.

Despite the enormous choice of bread available and the opportunity to buy it in the unlikeliest of places (at least for someone used to visiting a garage to fuel his car not himself), almost all British bread was less nutritious and more indigestible than anyone could have guessed. Why? Because changes at all stages of production, from wheat to finished loaf, have altered our daily bread in ways that are now becoming indisputable.

There is no conspiracy here, just the inevitable result when commercial self-interest trumps public health. After the Second World War, plant breeders developed hybrid strains of wheat that delivered higher yields under intensive conditions (heavy applications of artificial nitrogen, herbicides and pesticides) and made lighter loaves. While aggressively selecting for bigger yields and more of the proteins that form the stretchy gluten in bread dough, wheat breeders ignored the density of minerals and vitamins in the grain. Indeed, it is striking that nutrition only gets mentioned on the National List of recommended cereal varieties when the grain is going to feed animals. Wheats for human consumption are not rated for nutritional density. So it is not surprising that modern hybrid wheats are 30-40% poorer in key minerals such as iron, zinc and magnesium than strains that were common only 40 years ago. If each mouthful of bread contains less to nourish us, we naturally tend to eat more. A clue, perhaps, to rising levels of obesity? It gets worse.

Recent research has revealed that if farmers boost yields and protein levels (the higher the protein, the higher the price they get from the millers) by putting sulphur and nitrogen on the wheat late in its growth, the resulting flour has nearly double the amount of the omega-gliadins (bits of wheat protein) that are known to trigger certain inflammatory reactions in the gut of sensitive people. New strains of wheat, intensive chemical agriculture, more people finding bread disagrees with them. Could there be a connection?

Perhaps the biggest change of all occurred in the Sixties when the Chorleywood Bread Process was invented. Its aim was to use more British wheat because imports (mostly Canadian) put a strain on

Britain's currency reserves and cost the baker more. Its method was high speed mixing with intense energy (about six times as much as a craft baker uses to mix his dough), a plethora of additives, greatly increased yeast quantities and no fermentation time. Before Chorleywood – indeed for all of man's breadmaking history – bakers took time to let their dough rise (or 'ferment'). That way, the small amount of yeast they put in could multiply naturally and react with the flour to produce enough gas to aerate the bread. Most bread was made in a two-stage process over twelve to sixteen hours. Time 'ripened' the dough, making it easier for the baker to handle and tastier to eat. Advances in molecular science now enable us to understand another, even more significant, role of time in breadmaking. As you allow dough to ferment, especially if it is made with a 'sourdough' starter containing beneficial bacteria, it actually neutralises some of the bits of wheat protein that are most likely to trigger coeliac disease and other auto-immune and inflammatory reactions to gluten. But almost all British bread is made from 'no time dough'.

Chorleywood was a triumph of efficiency: you could get from raw flour to wrapped loaf in less than three hours. OK, there were the additives. Quite a mouthful, in fact. Potassium bromate (now banned in the UK as a possible cancer producer), azodicarbonamide (also banned), L-cysteine hydrochloride, sodium stearyl-2-lactylate, and so on - the list was a long one, but to avoid too many frightening chemical names, bread labels were allowed to group the nasties under reassuringly bland headings such as 'flour treatment agent' and 'emulsifier'. No mention was made of the routine bleaching of flour with chlorine gas, a practice finally banned as recently as 1999 in the teeth of opposition from industrial millers and bakers.

The additives were mostly derived from substances that would never normally form part of the human diet. But we were reassured that they were safe – until, that is, scientists told us they weren't, whereupon they were banned. How often has the British bread-eating public been experimented on in this way, and at what cost to its health?

When their favourite bread 'improver', potassium bromate, was banned in the early 1990s, industrial bakers were concerned that they would be unable to produce the kind of bread that the public had grown used to. In the nick of time, a whole new category of 'improvers' was developed, based on industrial enzymes. Nature was raided for ever more exotic sources of these biological catalysts, from cereals, moulds, microbes, bacteria and even animal guts. The improver boys had a field day. They found that the right mixture of enzymes – sometimes tweaked by the genetic engineers – could not only produce light fluffy bread like the banned chemical additives, but also stop the baked bread from going stale.

Perhaps the ‘killer’ feature of enzymes from the baker’s point of view is that they don’t have to be declared on the label. A loophole in food labelling regulations classifies most enzymes as ‘processing aids’, not additives. As such, their use or presence doesn’t have to be declared to the consumer. Read the baking magazines and you will see advertisements for ‘clean label’ improvers. These are cocktails of emulsifiers and enzymes, often genetically modified, that can be used in bread *without any mention on the label*. I’ll hazard a guess that most of Tesco’s not-so-fresh loaves made (or given their final tan) in the instore bakery are made with just such potions.

It’s time to recognise that the changes that have occurred in the way we make most of our bread are a massive own goal. It’s less nutrient dense than it could be, laced with undeclared additions that have no role in human nutrition and fermented for so little time that it clogs up our guts. And if there’s one thing worse than not telling us what’s in the bread, it’s telling lies about where and how it’s made.

But don’t despair. There are effective - and delicious - ways to avoid the indigestible half-truths of industrial bread and the instore ‘bakeries’. We’ve started a Real Bread Campaign to spread the production and enjoyment of bread made without additives and with proper time to ferment. We’re calling for proper labelling of bread and an end to hidden processing aids. The website (www.realbreadcampaign.org) has a Real Bread Finder where you can enter your postcode to see who’s doing it right in your area. If you want an honest loaf for an honest price, this is the place to look.

Best of all, you can make your own bread. It’s as easy as pie (even with a bread machine), it saves you money, it’s fun to do with family and friends – and it’s so satisfying that it could just change your life.

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