

CAN AN ORGANIC TWINKIE BE CERTIFIED?

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"What constitutes food is an old question. As early as the time of Hippocrates there existed a belief in the occurrence of a single universal element. There were many kinds of food but they all supplied the same nutrient. Our ideas have changed considerably since that time. . . Today we must deal with several dozen specific factors. . . but we must recognize that there is more to adequate nutrition than the mere combining of the known compounds into a diet."¹

As the epigraph suggests, popular ideas about what constitutes food have evolved over time, and are continuing to do so. For the U.S. Food and Drug Administration food is "articles used for food or drink for man or other animals," and includes chewing gum², a definition that does not capture what most people seem to mean when they speak of *food*. This ambiguity about the nature of food itself has made the question of what constitutes an organic food remarkably contentious. For more than a decade, the notion of an organic Twinkie™ has been floating around among sustainable food system advocates as an example of the ultimate food irony³. But for most of that time, the idea that this sweetly spongy snack classic might one day show up on a supermarket shelf bearing a "certified organic" label has seemed a potent warning rather than a serious possibility.

All that has begun to change over the past several years as the National Organic Standards Board and the U.S. Department of Agriculture have struggled to develop implementing regulations for the Organic Food Production Act of 1990 (OFPA), and as

¹Elvehjem, C.A.: Landmarks in the progress of the science of nutrition. *Annals of the American Academy of Political and Social Science* 225: 10-16, 1943.

²Federal Food, Drug, and Cosmetic Act, as amended. Washington, D. C.: U.S. Government Printing Office, July, 1993.

³ The notion may have been first articulated by Clancy in a speech to the Second Conference on Sustainable Agriculture at Pomona College in April, 1984.

Codex Alimentarius and other international organizations have worked to internationalize "organic." Will there be certified organic Twinkies, once those regulations are in place? That will depend, of course, on how an "organic food" comes to be defined, and *that* is a definition with a history.

The debate in the U.S. about what constitutes an *organic* food long predates the passage of the OFPA, and was preceded by a much longer-running debate about whether such an object could be said to exist at all. From the time the designation "organic" was first applied to products sold largely in health food stores, the Food and Drug Administration refused to define the term "organic food" because of the difficulty of identifying *in the store* any differences between foods produced conventionally and those produced by people who called themselves organic farmers. An organic apple, FDA argued, couldn't be distinguished from a non-organic fruit by looking at them--or even by applying standard chemical tests. Therefore, they reasoned, there was no significant difference between them. From that they concluded that labeling a food organic implied a superiority that, by their chemical criteria, did not exist⁴.

This implication of superiority was sufficiently troubling that the U.S. Federal Trade Commission even proposed regulations to prohibit the terms "organic" and "natural" in food advertising⁵ In the regulatory hearings that followed, many of the "scientific" witnesses shared the Commission's concerns about deception. Some scientists went even further, insisting that any use of the term "organic" in relation to particular foods was misleading because according to the "well-established scientific definition of the term," all foods are carbon-containing, and therefore, all are organic.⁶ Yet even witnesses who objected to the term on such literal grounds recognized that in common usage, the term 'organic' referred to the manner in which a food had been grown.

⁴ See eg. Food for Thought: Organic Foods. *Medical World News*, March 17, 1972.

⁵ *Federal Register* 39842, 39862, November 11, 1974.

⁶ *Proposed trade regulation rule on food advertising*. Staff report and recommendations. U.S. Government Printing Office: Federal Trade Commission, September 25, 1978.

By 1978, when the FTC staff published its recommended provisions⁷, it had come to agree that the 'organic' designation of a food referred to its growing method, and that an accepted definition of that method was available.

'Organically grown food is produced on humus-rich soil whose fertility has been maintained with organic materials and natural mineral fertilizers. No pesticides, artificial fertilizers or synthetic additives are used in the production of organic foods.'⁸

Therefore the FTC proposed allowing the terms 'organic' or 'organically grown' in advertising for foods that met such a standard.

Before the rule could be implemented, however, the FTC's overall effort to regulate food advertising had come crashing down under heavy fire from industry lobbying groups and consequently from Congress. By mid 1980, the Commission rejected its own staff's proposal to set a standard for "organic"⁹, and for ten years, no further federal effort was made to define the term in the United States.

Until the passage of the OFPA, all subsequent U.S. moves toward defining "organic" came from farming groups mostly at the state level¹⁰. Because the emphasis was on production, little effort was made to carefully define what could and couldn't be done beyond the farm gate. The relatively few processed "organic" foods manufactured prior to the 1980s were found largely on the shelves of health food stores where the FDA's hands-off policy raised no regulatory questions about their integrity. When the federal organic legislation was being drafted in 1990, an organic label on a processed food might mean it contained as little as 20% organic ingredients¹¹.

As public concerns about pesticides and other possible contaminants in food generated increased interest in "organic," the term itself began to gain more widespread

⁷ ibid

⁸ ibid.

⁹ FTC defers "natural" issue; approves much of staff-proposed phase I food rule. *Food Chemical News* May 26, 1980, p 33.

¹⁰ *Organic Agriculture, What the states are doing*. Washington, D. C.: Center for Science in the Public Interest, June, 1989.

¹¹ Merrigan, Kathleen, Organic certification program. Senate Committee Draft Report June 26, 1990. 37 pp mimeo.

credibility: The public came to accept the term "organic" on a product as meaning that something about the product so labeled *was* different and possibly better--although consumers were not always clear what that *something* was. "Organic" processors, envisioning a vast demand waiting to be met, began to generate new products, many of them capable of moving beyond the very limited "health food" marketplace into the the broad industrial food stream where the selling environment was profoundly different. In the global supermarket, the new "organic" products found themselves competing in a setting where new products were churned out at the rate of more than 40 a day¹². In such a setting the vision that once motivated organic has proved hard to hang onto.

Looking at the range of food products now marketed as "organic" it is clear that the appropriate question about the organic Twinkie is no longer "can there be an organic Twinkie?" but "On what grounds could an organic Twinkie be denied certification?". Obviously, that question cannot be answered until USDA has published draft rules, allowed time for public comment and issued final regulations. But as I have struggled with that question, using the guidance provided by the recommendations to the agency from the National Organic Standard Board, I have reluctantly concluded that there is probably no entirely "scientific" ground on which an organic Twinkie could be barred from certification.

What more is a Twinkie than a "golden sponge cake with creamy filling"? Its label says it is made from the following ingredients:

enriched wheat flour [flour, niacin (a "B" vitamin), ferrous sulfate (iron), thiamin mononitrate (B1), riboflavin (B2)], water, sugar, corn syrup, high fructose corn syrup, partially hydrogenated animal and/or vegetable shortening (contains one or more of canola, corn, cottonseed, or soybean oil, beef fat), eggs, dextrose" and "2% or less of modified food starch, whey, leavenings (sodium acid pyrophosphate, baking soda, monocalcium phosphate) salt, starch, yellow corn flour, corn syrup solids, emulsifiers (mono and diglycerides, lecithin, polysorbate 60), dextrin, calcium

¹²Gallo, Anthony E. Food marketing sales, mergers and new product introductions rose in 1994. Food Review 18:2:24-25, 1995.

caseinate, sodium stearoyl lactalate, cellulose gum, wheat gluten, natural and artificial flavors, caramel color, artificial colors (yellow 5, red 40), sorbic acid.

What will the Organic law say about such ingredients? Although the final federal regulations defining "organic" have yet to be issued by the USDA, the proposed rules drafted by the National Organic Standards Board seem to put few barriers in the way of an organically certified Twinkie. Where the eggs and the raw materials for the flour, fats, and sugars are concerned, the OFPA avoided the problem of whether or not "organic" products could be distinguished compositionally in the grocery store. Under the new law "organic" production is not focussed on product but on process. The regulations being developed to implement that law specify that organic foods can be identified by specific ways of treating soils, plants, and animals. So there seems to be no reason why organic eggs could *not* be used to make a certified Twinkie. And "organic" Twinkies *could* certainly include: corn syrup made from organic corn; sugar extracted from organically grown cane or beets by certified processors; and enriched wheat flour (mandated enrichment is specifically allowed) and corn flour milled by a certified processor from organic wheat and corn respectively.

The NOSB recommendations contain a few clear restrictions about what can be done to organic "raw materials" once they have gone beyond that stage. Organic foods cannot be contaminated during handling with non-organically produced or other prohibited materials, cannot be irradiated or have anything added that is the product of recombinant DNA technology. As for the Twinkie, if that mix of 27 ingredients (counting the optional shortenings, leavenings, colors and flavors each as a single ingredient) was to call itself organically certified, 95% of those ingredients would need to be organic and the remainder would need to be on the National List. I am not a food chemist, but I assume that such a feat might be pulled off if the artificial flavors and colors were replaced with "natural" ones and other adjustments were made in the choice of fats and "functional" additives.

What may save us from walking past an certified organic Twinkie in the supermarket, then, is not the legality or illegality of such a product but the fact that it might not be economically feasible to produce. Its certified status might not justify its luxury cost even for a mother misled into believing that any product so labeled was truly healthy. But if products that seem to distort the organic intention are enabled under organic regulations, that outcome will not imply the failure of this particular regulatory process. *What would permit an organic Twinkie is the limitations reductionist science has put on our ability to take account of things that matter.*

The quotation at the head of this essay makes clear that the understanding of what food is has been progressively complicated by scientific discovery. Once thought to be a single substance, food--very recently in historic time--came to be recognized as a carrier of a variety of nutrients. As nutritional discoveries multiplied, scientists in the field came to believe that everything *important* about food would soon be able to be specified as chemically identified "nutrients." By this time, of course, "important" had come to mean "nutritionally important," as perceived and measured by a reductionist science.

The task of identifying the major nutrient substances in food was thought to be largely complete in the 70's, at which point food processors ceased to be constrained from treating food as simply one more consumer product. Consider this 1972 comment from a well known food technologist in the *Journal of Nutrition Education*,

food can be defined as nutrients plus flavor plus color plus texture. The last three are marketable attributes, but the product to be considered food must contain nutrients in proportion to the marketing role.¹³

According to such a definition, food is not *more than* the sum of its parts; it is not even the *sum of its parts*, but the sum of its *characteristics*. Of these characteristics, nutrients are the concern of nutritionists, and flavor, color and texture are the concern of marketers who

¹³LaChance, P.A.: Food guides. *Journal of Nutrition Education* 4(2):45-46, 1972.

can combine them into products designed to tempt the nutrients they contain off supermarket shelves, into consumers' shopping carts, and thence into the gut. This reductionist view of food has recently been set back by the unexpected discovery that many substances formerly viewed as incidental food components (eg. carotenoids) seem to have a role in maintaining health. But food manufacturers are undaunted and will arrange to add to their products any nutritional substance that appears to have financial implications¹⁴.

Will organic foods follow this reductionist route? Some time ago I had occasion to attend a meeting at which the future of the organic food industry was being discussed. At a session on the likely outcome of the organic processing regulations, one of the attendees asked what restrictions would be put on the use of substances not available in an organic form but "essential" in the production of specific processed products. The question seemed unsettling. I had always assumed that there were some products we wouldn't *want* in an "organic" form, an "organic" Gummi Bear, for example. So I raised my hand to ask whether we didn't need to discuss the word "product" in the phrase "essential to the manufacture of a product." Weren't there food products we preferred not to see manufactured in organic guise? "Or was the goal," I asked, "to have a parallel organic food supply, one with organic Twinkies, organic Eggo Toaster Waffles, and organic Count Chocula Cereal?" The speaker laughed uncomfortably, stammered a bit and said it was odd I should bring up Twinkies since the National Organic Standards Board had discussed them at some length. Then various audience members spoke up, and in no time at all, it was evident that at least part of the organic food industry was indeed working toward a parallel food supply where a certified organic Twinkie or its equivalent would not be beyond imagining.

What is it about the idea of an organic Twinkie that so appalls the rest of the organic community? We should probably start with health. Surely any organic food

¹⁴Brody, Jane. Article on carotenes, *New York Times*, 1995 (can't seem to locate. Probably kill this citation)

ought to be healthy. There's no need to debate whether--all other things being equal--an organic apple is demonstrably more nutritious than an apple raised non-organically. All other things are almost never equal enough to prove that definitively. But we feel instinctively that organic foods ought to be nutritious, and a Twinkie--composed almost entirely of refined carbohydrate and fat tarted up with artificial colors and flavors--doesn't seem to fit any definition of nutritious that would satisfy.

Where food regulation is concerned, however, quantification sets a trap. Before I retired from the University, there had been a number of efforts at the federal or state level to pass laws that would allow only "nutritious " foods to be sold in school vending machines, or during school lunch. Since quantitative guidelines are usually a necessity when laws are written, I used to require students in my nutrition policy seminar to write a legal (quantitative) definition of a nutritious food. They quickly discovered that by many quantitative standards, an apple isn't nutritious--or it wasn't, until the "authorities" decided complex carbohydrate and water "counted"--so the students used to bend over backwards trying to write some sort of definition that would let an apple in and keep a candy bar out.

How might we draw a line between two products made with organic wheat, a pasta (84% carbohydrate--mostly complex--and some vitamins and minerals) which most of us would probably want to allow, and a Twinkie (65% carbohydrate--mostly simple) fortified to contain significant amounts of various nutrients? In an era when the laxative Metamucil has claimed it contains as much fiber as two bowls of oatmeal¹⁵, or the table sweetener Equal has tried to position itself "as a healthy alternative" like "2% milk"¹⁶, nutrients alone cannot define a healthy food. What we mean by "nutritious" is something more. We mean, I think, something like wholesome.

¹⁵Freeman, L.: Sowing Metamucil's oats. *Advertising Age*, April 17, 1989.

¹⁶Liesse, J.: Equal sweetens ads with Cher. *Advertising Age*, February 10, 1992.

A professor of our acquaintance once used an apple and a Twinkie to distinguish between "food" and something he called "gut filler," food being something that points us toward a particular place, a particular time of year, and a set of ongoing global processes, and gut-filler being something that is "manufactured." That distinction has a lot to do with why an Organic Twinkie appalls. Just as we now know "that there is more to adequate nutrition than the mere combining of the known compounds into a diet,"¹ many of us also believe that there is more to "organic" than simply combining 95% organic ingredients into products that will sell. At a minimum, we have wanted organic foods to pull us back to nature, and to a set of values that care for nature implies.

Recently, a leader in the northeast organic community wrote,¹⁷ the following:

[B]efore organic agriculture was codified in certification standards and widely recognized, . . . [i]ts lack of specific definition allowed many of us to associate it with important characteristics of scale, locality, control, knowledge, nutrition, social justice, participation, grower/eater relationships and. . . connections with schools and communities.

In other words, the term "organic" carried with it an implicit environmental, social, economic, and nutritional wholesomeness. But when "organic" is legally defined solely in relation to a set of growing and processing methods, the term no longer comes with a conscience. When regulations are guided by reductionist science, few products are likely to fail the test as long as 95% of their ingredients are organic. -

If food is, at a minimum, a substance that nourishes, then one problem we face in attempting to fit organic food into our existing food system is our nutrient-constrained definition of nourishment. For over 99.9% of the time our species has been on earth, nourishment had nothing to do with nutrients and everything to do with community. The foods people ate came largely out of the communities they lived in--products of different ways of collecting, growing, preparing, and sharing that were unique to different groups of people around the world. In the last 500 years or so, many of these

¹⁷ Duesing, Bill. Is organic enough? *Natural Farmer* Winter, 1995-96, p 24.

traditional communities have been adversely affected by conquest, so that most "native" diets we now see are poor remnants of traditional eating patterns. Even these remnants, however, were until very recently made up of substances clearly recognizable as foods. Food "manufacturers" in my parents' generation could do little more to foods in the factories--heating them, for example, or drying them, or putting them aside to ferment--than could be done in the household.

Today, however, the food technologist's power over the products of nature has multiplied to the point where he can create foods never before eaten by humans, foods whose safety and nutritiousness are at best unprovable and at worst doubtful. The prospect we now face is that some of these substances will be allowed to carry the identifying adjective "organic," which implies something very different.

The energy-intensive, distant, large-scale, corporate-controlled global food distribution system doesn't provide decent work, good nutrition, wholesome flavor, or knowledge [but i]t will be happy to offer organic as an option, and will keep working to increase its share of our food dollars.

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Here and around the world, the global industrial food system has flourished on the destruction of human community. I commented earlier that since the development of nutrition science, "important" has come increasingly to mean "nutritionally important." I should have added, "especially in the United States," for we are too young as a nation to have developed deeply embedded eating traditions before food science took over, so we have relinquished real foods much more readily than have older nations. In Europe, for example, eaters learned long ago to value the unique taste of specifically local foods and beverages. But even there, global trading rules are systematically destroying local food traditions.

We are often reminded that we have cheap food; what we are seldom told is that we have cheap raw materials produced at the expense of eroded soils, groundwaters both

¹⁸ *ibid.*

overused and polluted with chemicals, displaced farmers and destroyed rural communities. Our present food system provides us with no information about whether or not the items it offers for sale have been sustainably produced--that is, whether they were produced with due attention not just to profit but to ecological responsibility and social justice. "Organic" should have helped us do that. The organic label should have assured us that those implicit characteristics mentioned earlier--appropriate scale, localness, community control, personal knowledge, good nutrition, social justice, broad citizen participation, close grower/eater relationships and farmer connections with schools and communities--were embedded in what we ate. When a certified Organic Twinkie or its equivalent turns up in the supermarket it will be a signal that organic no longer carries such assurances. Such an outcome ought passionately to be denounced.

