

Heresies: A Feminist Publication on Art and Politics, "Nuclear Food," Volume 6, No. 1, Issue 21, 1987.

## **Nuclear Food**

While on vacation, as I was leafing leisurely through the Sunday *New York Times*, I came across a long article about food on page two of the Business Section. For a moment I thought I was reading the Home Section, but a quick glance at the page heading assured me that I wasn't. Then I discovered the article wasn't one, but two articles. The first was in favor of, and the second opposed to, a recent Food and Drug Administration rule allowing the IRRADIATION of fresh fruits and vegetables, pork, and grains for the first time and tripling the dose currently allowed to be used on spices. What food irradiation was, and why it was or was not desirable, was treated very differently by the two writers.

The tone of the first article, "A Healthy Way to Extend Food Life," annoyed me. It was written as if the reader was an elementary school kid to whom the rules of a new game were being explained: "Irradiation involved radiant or light energy that passes through food... It is not unlike passing a briefcase through an airport scanning machine... The briefcase is perfectly safe to handle when it comes out the other side... The food industry welcomes this technology as another option among a wide variety of modern food preservation methods..."

The second article, "The F.D.A.'s Game of 'Genetic Roulette'," sent the bio-tech word GENE-SPLICING racing through my mind. I thought it might be more interesting than the first. However, the articles predictions of impending doom almost drove me to crumple up my newspaper more than once. Who wants to read this crap while sitting on a beach in Fire Island?

But a masochistic sense of my duty to be an informed citizen won out. This is a gist of what the author said: "One would think, after the accident at Chernobyl and Three Mile island, that the Government would have developed a healthy skepticism about nuclear technology... (it's) reminiscent of the Government assurances about the safety of fallout from nuclear tests in Nevada... Each plant requires the use of one million to 10 million curies of radiation to operate—the equivalent of concentrating all the long-lived radiation from a one megaton nuclear explosion... (plant workers) will be at risk of immediate death from radiation sickness should they be exposed." If a worker opens the wrong door...

I was aghast. The article read like a piece of science fiction, but I knew it wasn't because it was in the Business Section of the *New York Times*. Then I got angry. I go to health food stores and pay a premium for natural food. Even then I can't know whether my natural food has been irradiated—there is no current requirement to label irradiated food. Moreover, there is no test the Government can use to check whether it has been irradiated, even though the radiation dosage for food will be 200 times the lethal exposure for human beings.

I tried to discuss the subject with my friends on the beach. They did not want to know or talk about it. This vacation was our only opportunity to tune out the world. Not trusting my strong negative emotions, I decided I must be overreacting.

A few days later, I called several of my “health-nut” friends and casually asked them what they had thought about the articles. None had seen them. Their Business Sections had been discarded along with the other sections that were never read. However, they’d all heard about FOOD IRRADIATION and were able to give me additional information.

I read all the material I could get my hands on. I learned how food irradiation worked. Gamma radiation from radioactive cobalt-60 (half life: 5.3 years) or cesium-137 (half life: 30.2 years) is beamed through foods to preserve them. The food does not become radioactive, but some cells are altered by the radiation. Mutations are formed. The gamma rays damage DNA, the “blueprint” for cell divisions which is contained in all living cells. The more complex the organism, the larger and more radiation-sensitive its molecules of DNA are, and small radiation doses can do it damage. Thus, small doses (100 kilorads) can prevent onions and potatoes from sprouting and kill or sterilize insects, but larger doses (1,000 kilorads or more) are required to kill bacteria and viruses.

Then I compared the benefits versus the hazards of food irradiation.

## BENEFITS

1. Food irradiation is effective in eliminating bacteria. It preserves food and gives it a longer shelf life than the chemical preservatives currently in use.
2. Food irradiation plants use cesium-137, which is created as a byproduct of making plutonium for atom bombs. The U.S. Department of Commerce reports: “Food irradiation will substantially reduce the disposal costs of nuclear waste.”
3. It may eliminate many chemical sprays used to preserve stored food.
4. It might be an alternative to some chemical preservatives.
5. It will make some people very wealthy.

## HAZARDS

1. Irradiation creates new chemicals in foods called “radiolytic” products, including hazardous compounds such as benzene, peroxide, and formaldehyde. Some studies show that irradiated foods cause cancer, kidney and liver disease, birth defects, and other problems when fed to animals. Other studies, however, suggest that “radiolytic” products can be consumed safely.
2. Radiation depletes vitamins and minerals in food just as cooking does. Since foods will later be cooked, there will be an even greater nutritional loss than from cooking alone.

3. Agriculturists say crops must still be sprayed in the field, and then, after irradiation, will have to be treated again with chemicals to prevent re-infestation of produce. So food will be irradiated in addition to being chemically sprayed.
4. Bacteria and viruses can develop resistance to radiation, just as insects do to pesticides. Dangerous mutations and new strains of pest organisms may develop.
5. The microorganisms that cause meat to smell or look spoiled may be killed by the irradiation process, but others requiring a stronger dosage could survive. Thus meat that might be contaminated could appear to be harmless.
6. The transportation and disposal of radioactive materials used in the food irradiation process could become problematic. An accident or mishandling of radioactive materials could cause large land areas to become permanently uninhabitable. Some workers in a New Jersey food irradiation plant actually threw some contaminated water down shower drains into public sewers.
7. Workers in food irradiation plants would be at risk of immediate death should they be exposed to the radioactive materials.
8. The Food and Drug Administration's current labeling and requirements exempt identifying irradiated ingredients. Additionally, the FDA has no empirical tests to detect irradiated foods; therefore, agency regulations are unenforceable.

Clearly, the hazards of food irradiation outweigh the gains. Then why is it being done? Once more the political and economic interests of a government-business combination are antithetical to the health and well-being of its consumer citizens. Food goes into our bodies. Unhealthy food makes unhealthy people. We are back to the times of "let the consumer beware!"

Let yourself be heard on this issue. Write to the Health and Energy Institute for information on how to get in touch with a consumer protection group in your area. This private organization advocates the preservation of a healthy environment, the wise use of energy resources and safe technologies, and the protection of human health and life.

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