



Food Irradiation and the Nuclear Industry: A Destructive Duo

The past and present of irradiation is intricately linked to the nuclear industry, which faces a sceptical populace worried about yet more nuclear disasters. With billions of dollars at stake, the nuclear industry is aggressively courting government officials and citizens to revive an industry that once claimed that nuclear power would be “too cheap to meter.” Whether food irradiation becomes a savior for this Cold War-era technology, the truth about the radioactive dangers of food irradiation must be told.

What is Irradiation?

Irradiation is the process by which food is exposed to high doses of radiation—the equivalent of up to 1 billion of chest x-rays. Irradiation kills bacteria and extends the shelf life of food but destroys its vitamins and creates new chemical compounds, some of which are known or suspected to cause cancer and birth defects. Although many studies indicate that serious health problems can result from a diet of irradiated food, international and national regulatory bodies refuse to consider the long-term health implications of irradiated foods.

The History of Food Irradiation

Food irradiation was born of nuclear technology. In 1953, President Dwight Eisenhower unveiled the “Atoms for Peace” program to the United Nations General Assembly. He offered the plan as a peaceful alternative to the horrors of Hiroshima and Nagasaki.

In hindsight, it is obvious that the program was not intended to end the development of nuclear technology. Instead, it was a public relations stunt aimed at promoting civilian uses of military technology, including nuclear-heated coffeepots and wrist-watches. The goal was to preserve the academic and industrial infrastructure of the nuclear industry to allow the weapons program to continue, while presenting a friendly “peaceful atom” to the public.

Who is in Charge Here?

World Health Organization (WHO): The United Nations created the WHO in 1948 to set global health standards. In evaluating the safety of irradiated food, the WHO has dismissed 50 years’ worth of research documenting a wide range of serious health problems in laboratory animals that ate irradiated foods. These problems include, but are not limited to, premature death, fatal internal bleeding, prenatal death, suppressed immune systems, tumors, stunted growth and nutritional deficiencies.¹ It is the responsibility of the WHO to determine the safety and wholesomeness of irradiated foods, a responsibility the agency has abandoned for decades.

International Atomic Energy Agency (IAEA): In 1959, the WHO gave the IAEA, a UN agency, the “responsibility for encouraging, assisting, and coordinating research on, and development and practical application, of atomic energy for peaceful uses throughout the world.”² Yet, the purpose of the IAEA is to promote the adoption of nuclear technology throughout the world and preserve the nuclear industry, not public safety.

SureBeam: SureBeam, based in San Diego, California, is an offspring of the Titan Corp., which developed linear accelerators as part of the U.S. “Star Wars” missile-defense system. Titan/SureBeam has since adapted these machines to kill food-borne

pathogens with electrons traveling near the speed of light. The companies have resorted to questionable marketing tactics, frequently calling its electron-beam technology “electronic pasteurization” in an attempt to keep the public uninformed.

Gammaster: Created in 1968 and based in Holland, Gammaster is one of the world’s largest food irradiation companies. It has irradiation facilities across the world, including France, Germany, Ireland, the Netherlands, Sweden and Thailand.

Ion Beam Applications (IBA): IBA markets itself as “an answer to all food safety issues.” It controls about half of the international food irradiation market (a global turnover of approximately 225 million euros) with 37 facilities across the U.S., Europe and Asia. IBA is the poster-child of the relationship between the nuclear and irradiation industries; in 1986 it was spun off from the nuclear research laboratories at the Catholic University of Louvain la Neuve in Belgium.

The Consequences

Nuclear Proliferation: The nuclear industry is seeking to use food irradiation as a band-aid for its inherent failure to introduce radioactive products and services without causing one fatal and life-threatening disaster after another.

- Cobalt-60 is the radioactive material most widely used to irradiate food. A vast majority of the world’s cobalt-60 is produced by Ontario-based MDS Nordion, which recently took over the Canadian government’s cobalt operations. The material is produced by bombarding naturally occurring cobalt-59 with subatomic particles.

- Cesium-137, a by-product of nuclear bomb production and nuclear power plants, is being eyed as the next food irradiation tool, as disposing of this incredibly powerful and dangerous radioactive material becomes a greater challenge for governments and the nuclear industry. The U.S. government alone is storing hundreds of millions of curies of cesium-137, much of which is buried in huge underground tanks. Without readily available radioactive materials and nuclear waste, the irradiation industry would be greatly limited.

- Unsafe and unneeded military technology should not be pursued. The only way for the nuclear industry, the U.S. Department of Energy and the IAEA to stay in business in these post-Cold War years is to adapt their technologies for civilian use.



Unnecessary Public Health and Safety Risks: Nuclear technology and its daughter, food irradiation, are direct assaults on public health and safety.

- Radioactive materials and waste could be transported thousands of miles to supply irradiation facilities. One train crash could endanger many lives.
- The risks associated with working in a nuclear facility are similar to those of a food irradiation plant. To pick one

example out of many, in 1990 an Israeli worker was exposed to cobalt-60 after an alarm in an irradiation plant failed. He died 36 days later.

- Irradiation facilities pose serious threats to the neighboring communities. In 1986, the executives of International Neutronics, an irradiator based in Dover, NJ, were convicted of federal charges of conspiracy and fraud after they dumped 600 gallons of cobalt-60 contaminated water down a shower drain that led to a public sewer system.

The Alternatives

Sanitary Food Production: Irradiation treats a symptom, not a disease. Instead of irradiating food at the end of the line, care should be taken to prevent meat from being sullied with bacteria-bearing feces, urine and pus while it is produced and processed. Sanitary food production would eliminate the need for irradiation.

Biodiversity: Only an industrialized agriculture system needs irradiation. Monoculture and biological engineering, two hallmarks of industrial agriculture, threaten biodiversity while aiding the assembly-line production of our food supply. Disease and infestations spread easily through monoculture crops.

Local Small-Scale Food Producers: Locally produced and purchased food does not need irradiation, and it is not associated with waste from food transportation. Local grocers need to know that consumers do not want irradiated foods.

¹ *Bad Taste: The Disturbing Truth About the World Health Organization’s Endorsement of Food Irradiation.* Public Citizen, October, 2002. <http://www.citizen.org/documents/BadTaste.pdf>

² Article III of the Statute of the IAEA. <http://www.iaea.org/worldatom/Documents/statute.html>



For more information,
contact us at:
(202) 546-4996
cmep@citizen.org
www.citizen.org/cmep