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Letters

Food irradiation: Who benefits?

"The Gamma-Ray Gourmet" (SN: 12/19&26/87, p.398) was fair to entrepreneurs hoping to cash in on food irradiation. Yet it is plain that it would be irresponsible to support food irradiation before a comprehensive investigation is made into the questions posed by it. Author Rick Weiss rightly points out the unintended irony of an irradiation supporter's claim, "Food irradiation is so good for food because it is so dangerous for everything that lives."

As an agricultural scientist I see a different side of things. I must ask, what happens to the producers if food irradiation proceeds? Quality products keep and ship well, and inferior products do not. In season, then, inferior products could be purchased and stored by engrossers who would use this as a lever to force prices down, even below production costs, and even for higher-quality products. One more link could be forged in the chains manacled the producers of new wealth to the manipulations of the holders of old wealth. This is easy to see if one spends time on the

This Week

- 84 HIV-2 Case Found, AIDS Drug Tested
- 84 Aspirin/heart issue, cont.
- 84 FDA to evaluate fat substitute
- 85 Priming for a lucky strike
- 85 Good-deed viruses stop mouse diabetes
- 86 Switching to glass makes device ultrafast
- 86 Trashes to ashes, all fall down
- 87 Is dark matter causing a glow?
- 87 Lightning pattern found in storms

Research Notes

- 88 Behavior
- 88 Chemistry
- 89 Earth Sciences
- 89 Space Sciences

Articles

90 Murder in Good Company

Cover: An anthropologist has found that the peaceful Gebusi society of New Guinea has one of the world's highest homicide rates. Here, a Gebusi man smokes a ceremonial pipe prior to a funeral feast for a relative killed for alleged sorcery. His feelings are ambivalent: The pipe is shared with other men to symbolize his acceptance of the homicide, but his blackened jaw is a symbol of the anger reflected in his eyes. (Photo: Eileen Cantrell)

92 TB Troubles

Departments

- 82 Books
- 83 Letters

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farm, as I do. Yet it should be considered by all. Ultimately our civilization will flourish or fail in accordance with how well we draw nourishment from our ecology.

This brings up another point. Does anyone claim irradiation will raise the levels of nourishment one may obtain from foods? Who, if anyone, claims it will improve flavor, texture or digestibility? Will not food irradiation proponents need to keep irradiated products from being so labeled? Have they not shown reluctance to do so, and will not an informed buying public soon enough show definite preferences? American farmers already produce a greater quantity of food than there are buyers supporting the costs of production. Do we not at some point have to turn to the task of upgrading quality?

Hugh M. S. Lovel
Director, Union Agricultural Institute
Blairsville, Ga.

"The Gamma-Ray Gourmet" correctly draws attention to some of the health and nutrition issues associated with this process

and the search for irradiation markers. Your readers may be further interested in knowing that federal legislation may also be brewing in this area. At the beginning of the 100th Congress, Sen. George Mitchell (D-Maine) introduced legislation that, *inter alia*, would bar the implementation of regulations currently allowing for a limited use of food irradiation. S. 461, the so-called Food Irradiation Safety and Labeling Requirement Act of 1987, is identical to the bill introduced by Rep. Douglas H. Bosco (D-Calif.).

S. 461 would additionally mandate a National Academy of Sciences study that would examine, in part, selected health and environmental issues possibly arising from food irradiation, including the wholesomeness of consuming irradiated food, possible contamination from improper irradiation, risks to the health of persons employed in irradiation plants, risks to the health of residents in communities proximate to irradiation plants and environmental risks potentially raised by transporting the sources

Letters continued on p. 95

FEBRUARY 6, 1988

83

of food irradiation.

The proposed federal bill further contains statutory provisions concerning proper labeling of irradiated food. This may be quite propitious. The current FDA regulations for food labeling do not apply to food products with an irradiated ingredient. For instance, irradiated tomatoes in tomato soup or irradiated peaches in a can of fruit cocktail would not have to be labeled as such. Moreover, the FDA regulation that irradiated foods must be labeled with a written warning and a logo is due to expire in April 1988; after that time, irradiated food will no longer require a written warning.

Active input from the scientific community may help structure proposed legislation in a way that is palatable to the public health.

Leo Uzych
Wallingford, Pa.

Sheltered from the storm?

In reading "In Search of Electrical Surges" (SN: 12/12/87, p.378), I was especially surprised by the lack of knowledge about the subject and by the lack of development of devices to help us protect our sophisticated electronic instruments of the Computer Age.

In 1982 I bought a telephone answering machine, a very fancy one, rated highly by CONSUMER REPORTS. Within months it blew out because lightning caused a power surge. I had it repaired, and I was sold a surge protector. When the next electrical storm came, the machine blew again. It was either that time or the next time around (after another repair) that I unplugged the machine from the AC

power and heard it crackling, being damaged once again.

Incidentally, unlike computers or shavers, the answering machine is supposed to stay on when one is away, and one can't often rush home, if it might rain. I had to suffer with the machine totally disconnected when the weather forecast said there might be electrical storms that day.

Eventually, I realized that the damage was coming via the telephone line. No one had any surge protector for this purpose. No one could tell me the proper voltage or amperage the lines use.

Finally, my car mechanic suggested I install a simple fuse, as is found in car radios. I installed one for the red wire and one for the green. One of the people at the store where I had bought the machine guessed that a 1/4-amp fast-acting fuse would be a safe bet. He was right. At a cost of about 23¢ each I was able to save my equipment from then on. Every time an electrical storm came around, the filament inside the cylindrical fuse would be pulverized, but my equipment would be safe, even if rendered inoperable for that day.

My main reason for writing this letter is to point out that your article did not mention fuses as a stopgap (literally) measure until someone perfects the surge protectors.

Henry J. Stark
Montgomery, N.Y.

It would seem from "In Search of Electrical Surges" that transient protection is primarily "witchcraft" and that scientists and engineers know very little about it. Nothing could be further from the truth! It is, in fact, a topic for which government standards exist along with

well-known circuit design and grounding, bonding and shielding guidelines. In addition, the electrical surges caused by the electromagnetic pulse (EMP) from a nuclear burst are far more serious than those addressed in the article, and EMP effects have been studied by experimental and theoretical means since the 1950s. As a result, protection techniques against EMP have been developed and refined over the years, and these are certainly applicable to the problem at hand.

Since it appears that theoretical and experimental techniques and design guidelines do, in fact, exist, then what is the problem? The primary problem is a lack of technology transfer. The sophisticated techniques that have been developed over the years for use on government systems have not been transferred to the commercial sector in a timely fashion.

A second problem is that design engineers often fail to realize that this is a statistical problem and not a deterministic one. When theoretical models or guidelines fail to predict exact values that are observed, the theory and guidelines are often discarded as being worthless in favor of an empirical approach often bordering on "witchcraft." The answer, therefore, lies in technology transfer and continuing education.

Rayner K. Rosich
Littleton, Colo.

Correction: In "The curious power of large numbers" (SN: 1/30/88, p.70), the fourth of the smallest integers that fit Euler's conjecture for fourth powers should be 422,481 instead of 422,560.

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