

Food irradiation and the presentation of fake research

How?

To do fake research is one thing, to get it accepted as genuine is something quite different. How did they do it?

For a start virtually no aspect of food irradiation remained untouched by fake research. Whether this was grain irradiation and insects that survived often with increased mould toxins, or meat and fish irradiation with bacterial problems, or fruit irradiation with increased bruising, or potato and onion irradiation with rotting, no matter what, fake research attempted to dispel all the adverse findings from genuine research.

This was often done by introducing more than one variable to manipulate a predetermined outcome. In addition the ploy of unrepresentative generalisation was used. So, a specific result was presented as having a general meaning.

One example concerns research on Salmonella. Under very special circumstances 2.5 kGy could control Salmonella. The report stated that 'under the given circumstances' etc., etc. This clause was left out in subsequent references and the results were generalised. So, from then on you read in pro-food-irradiation literature that only 2.5 kGy is needed to control Salmonella, while the reality is that you need around 8 kGy. There are more than 2000 different Salmonella strains all with different radiation sensitivities depending on what nutrient they are on. Only around 20 strains were tested so far. So much for the reality.

Results only reported

Fake research produced a flood of research reports often hidden in Technology Journals where there is no peer review. At regular intervals all results from fake and genuine research were put together into a summary report. For obvious reasons it would be impossible to report all the varying research protocols that had been used. So, the only thing that was reported were the results.

These summaries were sent to experts in their field who were invited to attend a symposium

for discussions (a symposium is a gathering of scientists for exchanging views). As far as the experts were genuine they would have been hard pressed for time. So, a summary report would have been welcomed. They would have assumed that the compilers of these reports were genuine scientists and they relied on this. So, generally the original research papers were not checked by the experts.

These symposia were also attended by experts 'summoned' to these meetings, because they were receiving Grants from the nuclear industry. Even if they would have suspected that some research might not stand up to closer scrutiny, they would have kept silent as speaking up could endanger their precious Grant.

And then there were the genuine fakers, scientists who wholeheartedly had sold out to the nuclear lobby because of the money involved. They often became active promoters. The nuclear industry pays very well you know. So, these symposia were attended by a very mixed group of people.

Misrepresentation

Reporting research results only made it easier to misrepresent genuine research. This was the case with research that showed that increasing irradiation doses resulted in more fatty acids in grains which stimulated production of mould toxins. In the summary report for discussion at the symposium however, this research was mentioned with the remark that no clear relationship was found between the upsurge in toxin production and radiation dose (1,2). So, this remark stated the very opposite of the research findings.

If you come across one blatant misrepresentation, then you start to wonder how many more there are in these summaries. The more so as genuine scientists exposing the hazards of irradiated food have been harassed and vilified by the rented crowd of fake scientists. Especially the research done on irradiated wheat by the National Institute of Nutrition of India in the 1970s, was most unwelcome and anything was done to discredit it.

Genuine research ending

The bulk of genuine food irradiation research was done in the 1950s and 1960s. In November 1968 NATURE ran an Editorial summing up the adverse effects from feeding animals irradiated food and the dissatisfaction of the FDA with these results (3). In 1969 a review outlined the problems and dangers of irradiated food and this was followed by another review in 1971 of similar content (4, 5). So, genuine research on food irradiation ended around this time, except in India.

Fake research moved on

There was no letting up by the nuclear industry. The FDA was 'massaged' just as the WHO (the funds for the World Health Organisation come largely from US interests) and the Symposia continued unabated. In the end genuine research was completely crowded out by fake research. And finally at the 1980 Symposium it was solemnly declared that food irradiated for up to 10 kGy was safe. By then the whole food irradiation issue had entered Fantasy-Land.

The poor ignorant scientist

The reports of these Symposia were published ('Recent Advances in Food Irradiation' for example) So, any scientist ignorant about food irradiation would go to his/her scientific library and find those symposia books on the shelves. And there was written that irradiated food was safe. So, inquiries set up by governments under public pressure would hear from independent scientists what they had read in those symposium summaries. Thus, misinformation has been well built into the system. In addition

any government inquiry is hampered by statements from biased researchers because of the Grants they receive.

Statements supporting faked safety

During campaigns to introduce food irradiation scientists with Grants from the nuclear industry were often forced to make positive statements on the issue. Sometimes they had to admit that they did not know anything about irradiated food.

Here are a few examples: 'Over the last 30 years research has been unable to show there are any adverse side-effects from irradiated food. So much consumer resistance has been the result of misinformation.' A statement from an Australian nutritionist in May 1988 who was receiving a Grant from the nuclear industry and who had admitted to know nothing about irradiated food.

Here is another one: 'The safety of food irradiation has been extensively studied since the 1960s and the technology was endorsed by the WHO. While safety has been well established, there is still a need to overcome scepticism and prejudice within the community'. A not too well informed officer from the Queensland Health Department in August 1999. Such statements complement all the fake research on food irradiation of the last 50 years.

Perhaps we should change such nonsense statements into: 'While the **lack of safety** has been well established, there is still a need to overcome ignorance within the scientific community.'

References

- 1 Priyadarshini, E. et al. 1979. Effect of graded doses of gamma irradiation on aflatoxin production by *Aspergillus parasiticus* in wheat. *Food Cosmet. Toxicol.* 17: 505-507.
- 2 Teufel, P. 1983. Microbiological aspects of food irradiation. In: *Recent Advances in Food Irradiation* (eds. P.S. Elias and A.J. Cohen) by Elsevier Biomedical p.223.
- 3 Editorial. *NATURE* vol 220 November 30, 1968 - page 849.
- 4 Schubert, J. 1969. Mutagenicity and cytotoxicity of irradiated foods and food components. *Bulletin WHO* 41: 873- 904.
- 5 Kesavan, P.C. et al. 1971. Cytotoxic and mutagenic effects of irradiated substrates and food material. *Radiation Botany* 11: 253-281



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