

Web-Based Tools to Increase Public Understanding of Nuclear Technology and Food Irradiation

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Abstract : Food irradiation is a processing and preservation technique to eliminate insects and parasites and reduce disease-causing microorganisms. Moreover, the process helps to inhibit sprouting and delay ripening, extending fresh fruits and vegetables shelf-life. Nevertheless, most Brazilian consumers seem to misunderstand the difference between irradiated food and radioactive food and the general public has major concerns about the negative health effects and environmental contamination. Society's judgment and decision making are directly linked to perceived benefits and risks. The web-based project entitled 'Scientific information about food irradiation: Internet as a tool to approach science and society' was created by the Nuclear and Energetic Research Institute (IPEN), in order to offer an interdisciplinary approach to science education, integrating economic, ethical, social and political aspects of food irradiation. This project takes into account that, misinformation and unfounded preconceived ideas impact heavily on the acceptance of irradiated food and purchase intention by the Brazilian consumer. Taking advantage of the potential value of the Internet to enhance communication and education among general public, a research study was carried out regarding the possibilities and trends of Information and Communication Technologies among the Brazilian population. The content includes concepts, definitions and Frequently Asked Questions (FAQ) about processes, safety, advantages, limitations and the possibilities of food irradiation, including health issues, as well as its impacts on the environment. The project counts on eight self-instructional interactive web courses, situating scientific content in relevant social contexts in order to encourage self-learning and further reflections. Communication is a must to improve public understanding of science. The use of information technology for quality scientific divulgation shall contribute greatly to provide information throughout the country, spreading information to as many people as possible, minimizing geographic distances and stimulating communication and development.

Keywords : food irradiation, multimedia learning tools, nuclear science, society and education

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