Topic 4 Backgrounder Assignment – Public Safety and Regulations

Use the web sites below to research food irradiation, food safety and food-borne illnesses. Your group will pay special attention to the public safety and regulatory aspects of these three topics. Based on your research, your group is to work together to create a single-page (maximum of 250 words) “Backgrounder” which will be used to help your classmates understand this aspect of this issue (see the Individual Writing Assignment – Op-Ed Piece for more information).

Below are some questions to help guide your research.

- Which international agencies have reviewed data from research into food irradiation?
- How does the study and testing of food irradiation compare to the testing of other methods of food preparation?
- Which agencies are responsible for food irradiation in Canada?
- Which Act regulates irradiated food in Canada?
- How long has food irradiation been regulated in Canada?
- What is the process by which approval is given to using irradiation on a food product?
- What is the internationally approved maximum level of radiation that foods may be exposed to and still be considered safe?
- Must irradiated foods be labeled?
- Has the irradiation of meat been approved for regulation?
- Do regulations guarantee the safety of the public from food-borne illnesses?

Web Links

- Canadian Nuclear Association - Irradiation vs Contamination
- Canadian Nuclear Association - Food Irradiation
- Canadian Food Inspection Agency – Causes of Food Poisoning (Retrieved Dec. 4, 2014)
  This page has links to information about common causes of food poisoning, including Listeria.
- Canadian Food Inspection Agency – Food Irradiation (Retrieved Dec. 4, 2014)
  This page has information about food irradiation, labelling, types of foods irradiated in Canada and food safety.
- Canadian Food Inspection Agency – Irradiated Foods (Retrieved Dec. 4, 2014)
  This page explains the requirements for food labelling for irradiated foods in Canada.
- Health Canada Food and Nutrition – Food Irradiation (Retrieved Dec. 4, 2014)
  This page has information about the foods which are currently irradiated and reviews of proposed new uses of food irradiation as well as answers to frequently asked questions.
- Health Canada Food and Nutrition – Food-related Illnesses (Retrieved Dec. 4, 2014)
  This page has information about Listeria and Food Safety for Ready-to-Eat Food.
  This page has information about Listeria and Food Safety for Ready-to-Eat Food.
- Public Health Agency of Canada – Listeriosis (Listeria) Outbreak (Retrieved Dec. 4, 2014)
  This page (archived) has links to updates from 2009 and 2010 including a Listeriosis Investigative Review and an Update to 2008 Listeria monocytogenes numbers.
  This update (archived), from the Public Health Agency of Canada, summarizes the confirmed cases, including deaths, from the listeriosis outbreak during the summer of 2008.
  This page (archived) discusses the Canadian Government Response to the listeriosis outbreak of 2008.
Topic 4 Backgrounder Assignment – Public Safety and Regulations – Suggested Responses

Below are suggested answers for the guiding questions.

- Which international agencies have reviewed data from research into food irradiation?  
  The World Health Organization, the United Nations Food and Agricultural Organization and the International Atomic Energy Agency have reviewed accumulated data from more than 40 years of research.  

- How does the study and testing of food irradiation compare to the testing of other methods of food preparation?  
  Food irradiation has been studied and tested more extensively than any other food preparation or preservation process. Decades of testing have proven that foods treated with appropriate levels of ionizing radiation do not have adverse effects on the consumer.  

- Which agencies are responsible for food irradiation in Canada?  
  Health Canada (Health Products and Food Branch, Radiation Protection Bureau), the Canadian Food Inspection Agency and the Canadian Nuclear Safety Commission all play a role in regulating aspects of food irradiation.  

- Which Act regulates irradiated food in Canada?  
  In Canada, food irradiation is regulated by the Food and Drugs Act.  

- How long has food irradiation been regulated in Canada?  
  Food irradiation has been regulated in Canada for more than 40 years. Initially, it was considered to be a food additive, but since 1989 has been recognized as a process.  

- What is the process by which approval is given to using irradiation on a food product?  
  Prior to using irradiation on a food product, approval must be granted by a regulatory body (in Canada, this body is Health Canada). Interested groups must provide reasons for using the irradiation process and demonstrate the safety of the irradiated product.  

- What is the internationally approved maximum level of radiation that foods may be exposed and still be considered safe?  
  Foods irradiated below 10 kiloGrays (kGy) are believed to present no toxicological hazard. Ten kGy is equivalent to about 100 million times the dose received during a hospital chest x-ray.  

- Must irradiated foods be labeled?  
  The Canadian Food Inspection Agency requires that irradiated foods be clearly marked with the international symbol for food irradiation and that they carry a statement indicating that the food has been irradiated.  

- Has the irradiation of meat been approved for regulation in Canada?  
  As of 2014, meat irradiation has not been approved by Health Canada. Approval is being sought for chicken, ground beef, shrimp and prawns. Other countries, however, do irradiate meat.
Do regulations guarantee the safety of the public from food-borne illnesses? Regulations can help to ensure that procedures such as food radiation are safe scientifically, but that does not prevent contamination during food processing and packaging.