Unlocking The Truth!

- According to the Center for Disease Control, 76 million people in the United States experience illness due to foodborne pathogens each year

5,000 of

these cases result in death

Food Irradiation

- Exposing food to radiation
- Also known as:
  - Cold Pasteurization
  - Ionizing Radiation
  - Electronic Pasteurization

1905: Issuance of patent for ionizing radiation

1921: U.S. patent granted for irradiating meat

1953: National Food Irradiation Program

1958: The Food Additive Amendment

1963: First approval of irradiated food by FDA

1970's: NASA uses irradiation to sterilize food

Sources of Radiation

- Gamma Rays
- Electron Beam
- X – Ray Radiators

Common Uses of Gamma Rays

- Sterilize consumer products
- Sterilize medical equipment
- Kill live cancer cells

Foods Approved by FDA for Irradiation

- Wheat and wheat powder
- White potatoes
- Fresh fruits
- Poultry
- Red Meat
- Fresh Shell Eggs
- Pork carcasses or fresh non-cut processed cuts
- Spices and dry vegetable seasonings
- Dry or dehydrated aromatic vegetable substances and enzyme preparations

International Food Irradiation Symbol

Treated by

Irradiation

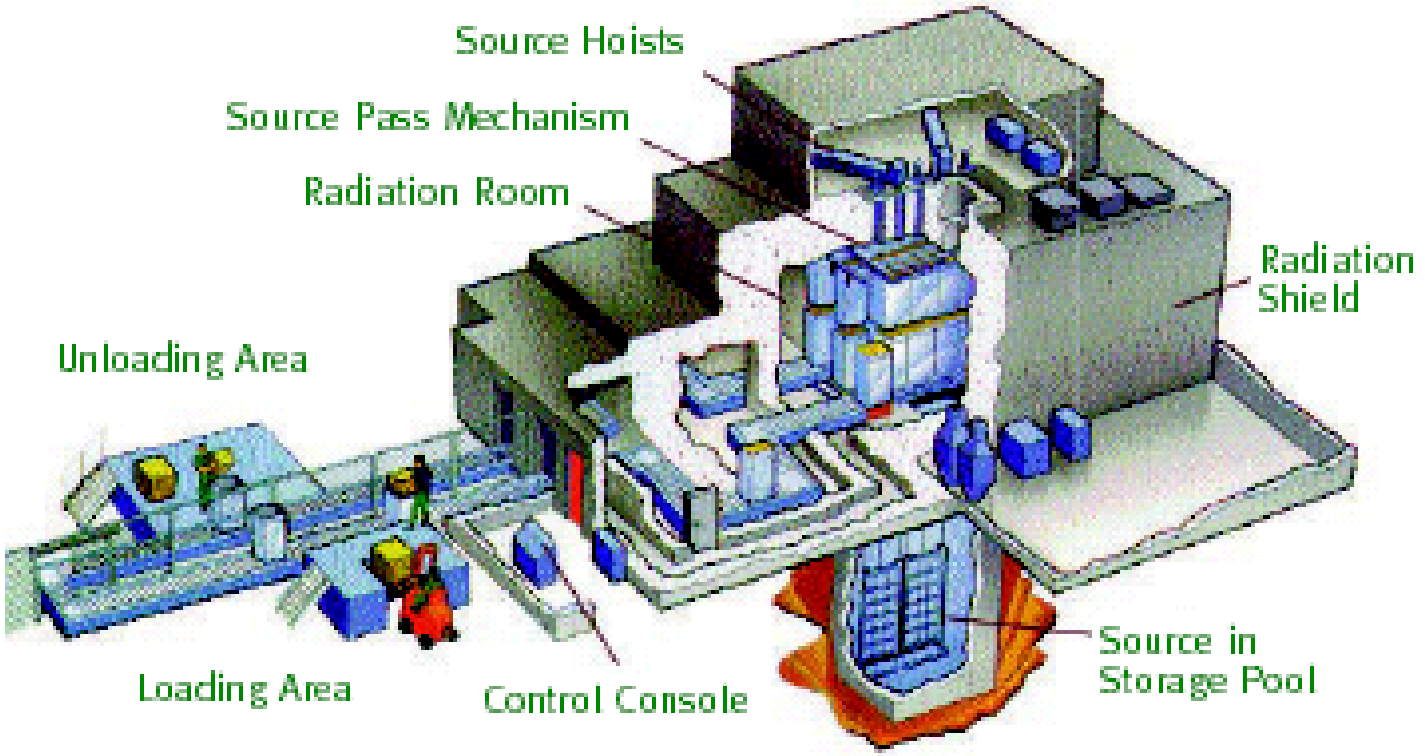
Who is irradiating food?

- More than 50 countries are irradiating food, including: *United States, China, Thailand, France, Mexico and Pakistan*

Lack of Consumer Acceptance

- *Common Concerns:*
  - Food will become radioactive
  - Ingestion of irradiated food will cause one to "glow"
  - Change in food quality
  - Decrease in nutritional value

Irradiation Facility



Irradiation Facility

Food Irradiation Benefits

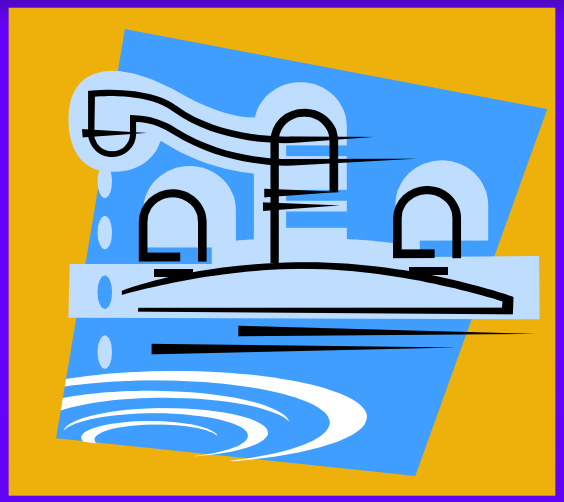
- Reduction in foodborne illness
- Reduction in food loss
- Cost benefits

Prevalence of Foodborne Illnesses Have Increased

- Increase in immune suppressed and elderly population
- Increase of imported fruit and vegetables in American diets
- Improvements in methods to detect foodborne illnesses

Enhance Food Safety

- Destroys parasites
- Destroys bacteria, including the spore – forming, which are heat resistant
- Inactivates viruses and prions at high doses



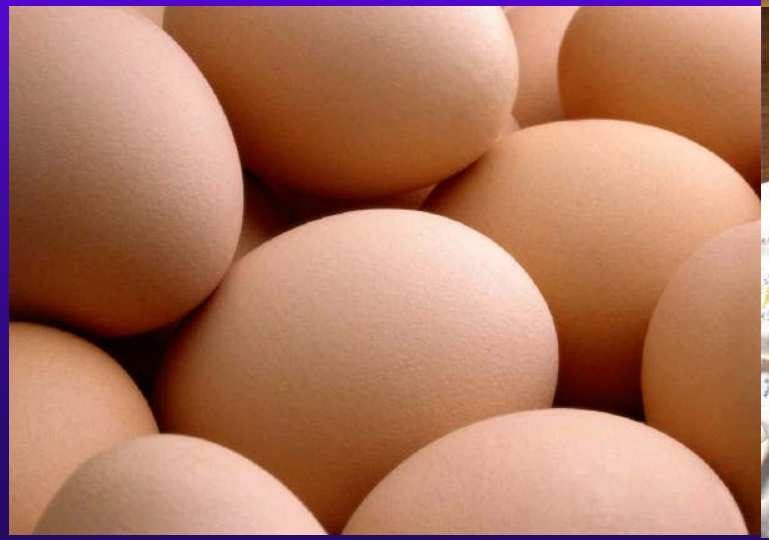
Not all microorganisms are eliminated, therefore, it is important to practice proper food safety procedures!

Enhance Food Supply

- Decontamination of food
- Disinfestation of food
- Extended shelf life
- Inhibits sprouting

Food Fact

25%



Medical Fact

Cost Benefits

- For every dollar the industry spends on food irradiation, the public will obtain a two dollar benefit as a reduction in foodborne illnesses and diminished food spoilage

Current News

- Mail is being irradiated to kill the bacterial spores, bacillus anthracis – commonly known as Anthrax
- Fisheries have proposed a petition to the FDA asking for the approval of irradiation to crustaceans
- A petition was also proposed for the approval of irradiating ready to eat foods

Supporters of Food Irradiation

- Government Agencies :
  - US Department of Agriculture (USDA)
  - US Food & Drug Administration (FDA)
  - Center for Disease Control and Prevention (CDC)
  - Public Health Service

Supporters of Food Irradiation

- National Organizations :
  - American Medical Association (AMA)
  - American Dietetic Association (ADA)
  - Council for Agricultural Science and Technology
  - Institute of Food Technologist

Supporters of Food Irradiation

- International Organizations:
  - World Health Organization (WHO)
  - International Atomic Energy Agency (IAEA)
  - United Nations' Food and Agriculture Organization (FAO)
  - Codex Alimentarius Commision
  - Scientific Committee of the European Union

Conclusion

Food Irradiation will:

- Secure a safer food supply
- Decrease food losses after harvest.
- Reduce illnesses and deaths due to microbial pathogens