

# A “Fresh” Look At Irradiation

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# International Food Information Council (IFIC) and IFIC Foundation

The logo for the International Food Information Council (IFIC) features the acronym "IFIC" in a large, bold, blue serif font. Below the acronym, the words "International", "Food", "Information", and "Council" are stacked vertically in a smaller, blue, sans-serif font, separated by thin horizontal lines.

International  
Food  
Information  
Council

Mission: *To effectively communicate science-based information on food safety and nutrition issues to health professionals, journalists, educators and government officials.*

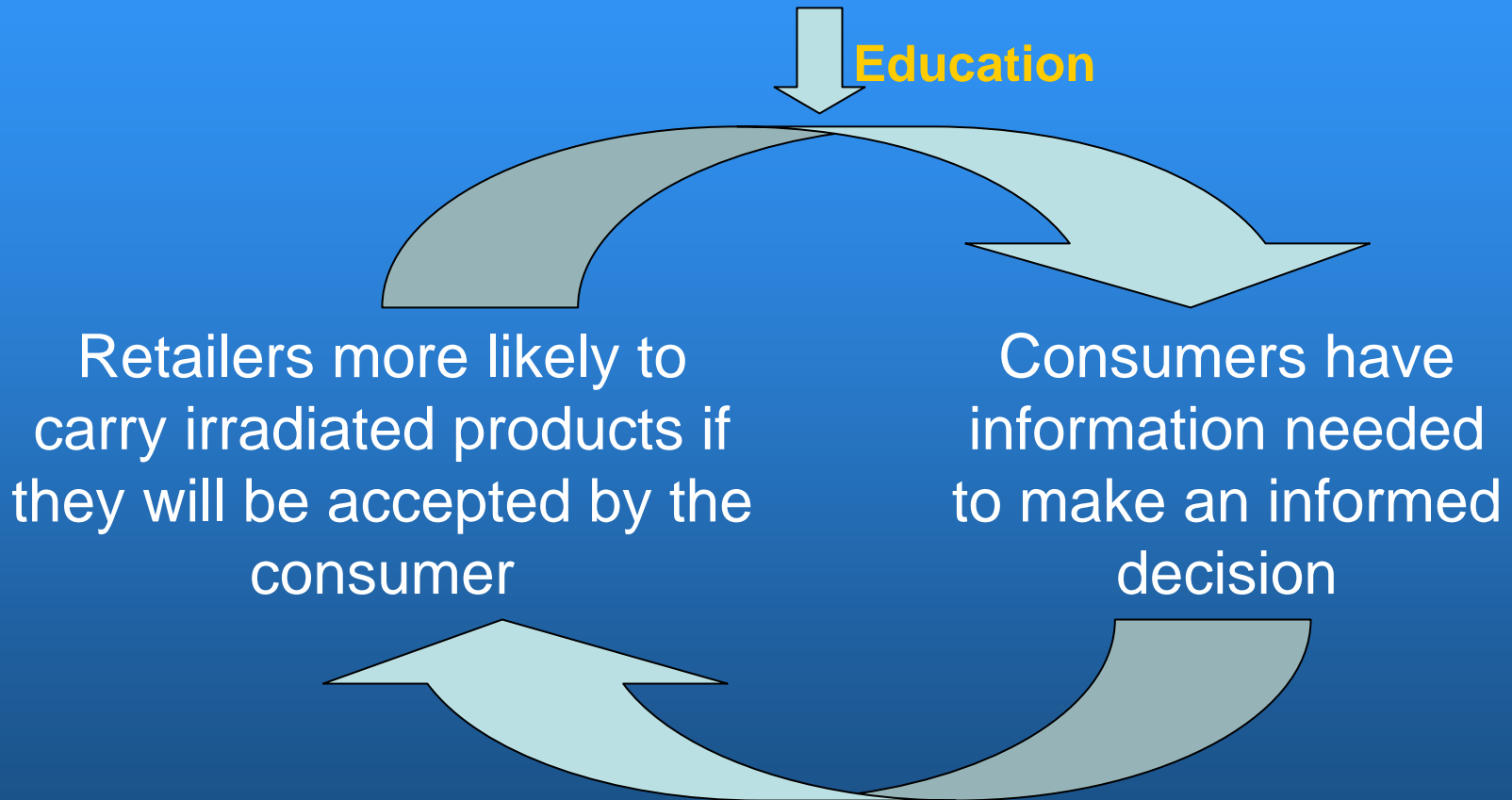
The logo for the IFIC Foundation features the acronym "IFIC" in a large, bold, red serif font. Above the acronym, the words "INTERNATIONAL", "FOOD", "INFORMATION", and "COUNCIL" are stacked vertically in a smaller, red, sans-serif font. Below the acronym, the word "FOUNDATION" is written in a red, sans-serif font within a red rectangular box.

Mission: *To effectively communicate science-based information on health, nutrition, and food safety for the public good.*

Primarily supported by the broad-based food, beverage and agricultural industries.



# Importance of Education in Affecting Supply and Demand



# Outline

- What did consumers believe a decade ago?
- What has changed in the environment since then?
- What do consumers believe today?
- Education and communication needs

# Qualitative Research, IFIC, 1998

- Six focus groups in 3 markets
  - ✓ Data not statistically valid but provided useful insights
- Consumer acceptance of food irradiation is positively correlated with level of knowledge about the process.
- Nearly all consumers had more favorable opinion of irradiation, even those who were initially unfavorable.

IFIC, 1998



# Qualitative Research, IFIC, 1998

- Taste is important and not outweighed by benefits.
- Consumers more accepting of irradiated meat than irradiated fruits and vegetables, because they will not be “fresh.”
- “Extended shelf-life” can have a negative impact on acceptance; consumers believe food will be “old.”

IFIC, 1998



# Qualitative Research, IFIC, 1998

Consumers agreed that irradiated foods should be labeled.

- The Radura symbol elicited a positive reaction
  - but most consumers agreed that this symbol would be too vague to stand alone
- Other labeling options were acceptable, such as “Cold pasteurized (irradiated) to eliminate harmful bacteria.”



IFIC, 2008



# Follow-up Quantitative Survey, 2002

**Population:** U.S. Adults 18+  
(Weighted to be nationally representative)

**Methodology:** Telephone survey

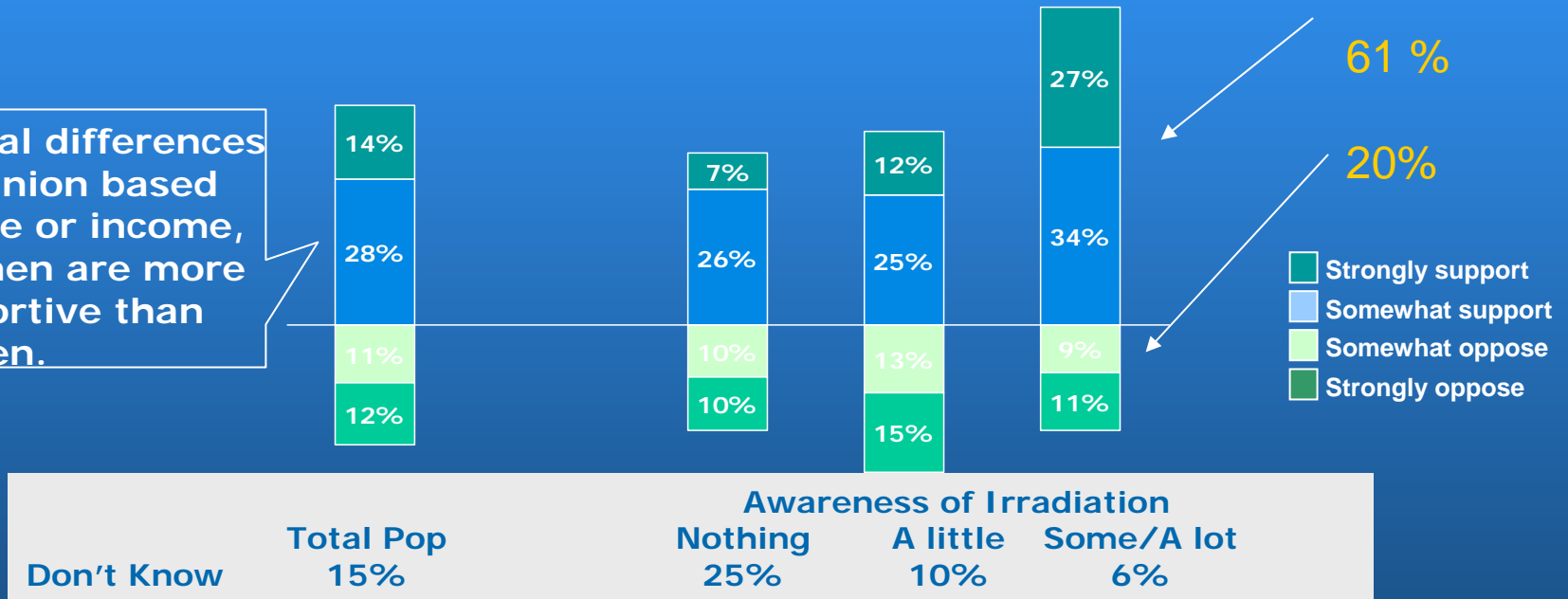
**Data Collection Period:** April 1-6, 2002

**Sample Size (error):** n=751 ( $\pm$  3.6 pp)



# Support Increases with Familiarity

No real differences of opinion based on age or income, but men are more supportive than women.



NOTE: Neutral category not shown



# Women make up larger percentage of opposition base

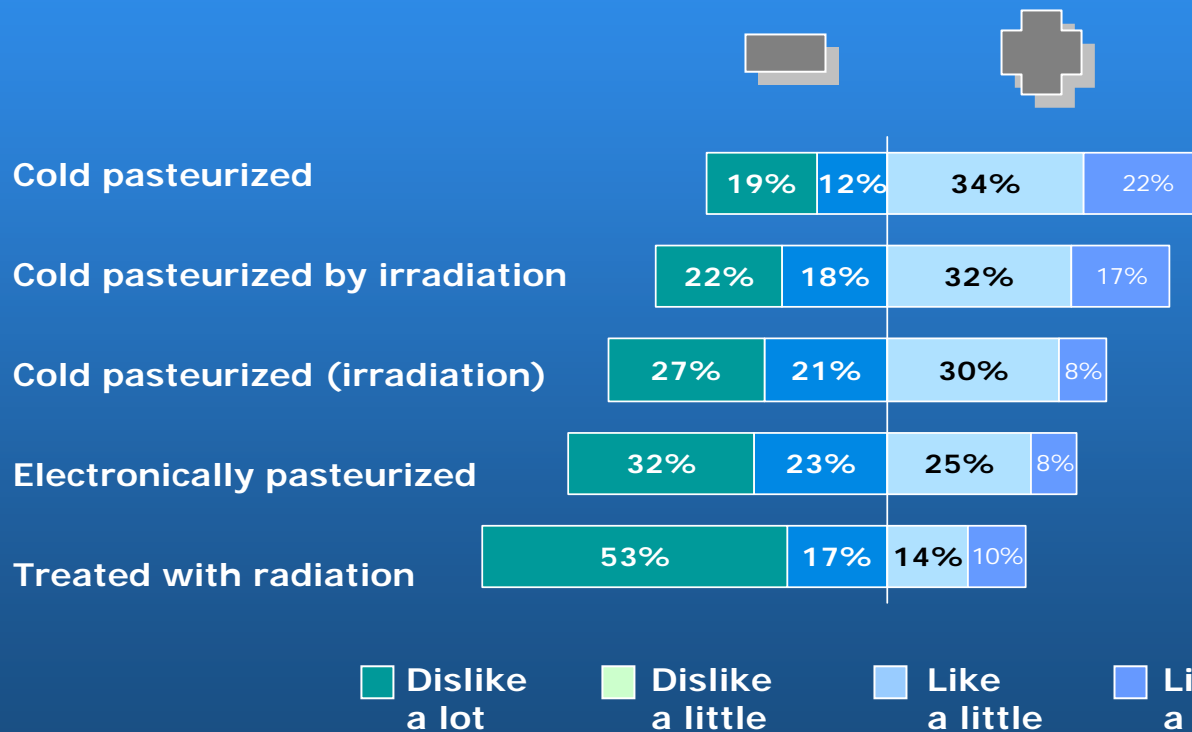
## Attitude Toward Food Irradiation

|               |        | Oppose | Support |
|---------------|--------|--------|---------|
| <b>AGE</b>    | 18-24  | 4%     | 14%     |
|               | 25-34  | 18%    | 15%     |
|               | 35-44  | 24%    | 19%     |
|               | 45-54  | 16%    | 16%     |
|               | 55-64  | 14%    | 18%     |
|               | 65+    | 24%    | 18%     |
| <b>GENDER</b> | Male   | 38%    | 52%     |
|               | Female | 62%    | 48%     |



# Terms that use “pasteurized” are most positive for Americans

% Like/Dislike Alternate Terminology



IFIC, 2002



# Changes in Environment from Consumer Perspective



# Outbreaks More Visible, Easily Identified

- Public sees wider variety of products implicated in outbreaks.
- PulseNet has improved ability to link specific products with specific illnesses, so source of illness is more often known to consumers.



# ...but Consumers are not Necessarily Listening

- Rutgers Food Policy Institute April 2009
  - Only 60% of consumers looked for recalled products in their homes
  - Consumers don't necessarily think recalls apply to them
    - ✓ 40% think the food they purchase is less likely to be recalled than food purchased by others.

# Ready-to-Eat Products

- FDA final rule published Aug. 2008 allows irradiation for fresh iceberg lettuce and spinach.
- Additional petitions for RTE foods in pipeline

FDA Consumer Health Information  
www.fda.gov/consumer

www.fda.gov/oc/ohrt/updates/irradiation082008.html

## Irradiation: A Safe Measure for Safer Iceberg Lettuce and Spinach

**O**n August 22, 2008, the Food and Drug Administration (FDA) published a final rule that allows the use of irradiation to make fresh iceberg lettuce and fresh spinach safer and last longer without spoiling.


Irradiating fresh iceberg lettuce and spinach will help protect consumers from disease-causing bacteria. Infections from bacteria such as *Salmonella* and *Escherichia coli* O157:H7 (E. coli) continue to be a public health problem in the United States. Illnesses from these bacteria range from uncomfortable symptoms to life-threatening health problems. Severe illness from E. coli, for example, can lead to kidney failure.

In addition to controlling harmful bacteria and other microorganisms, irradiating fresh iceberg lettuce and fresh spinach will allow the greens to keep longer without spoiling.

The foods affected by the final rule are:

- loose, fresh iceberg lettuce and fresh spinach
- bagged iceberg lettuce and spinach

**Irradiation and Safety**  
Irradiation (also sometimes termed "ionizing radiation") is a process of treating products with a measured dose of



U.S. Food and Drug Administration | www.fda.gov/consumer | August 22, 2008



# Population at Greatest Risk

- Infants, young children, pregnant women, older adults
- People with weakened immune systems, certain chronic diseases
- 25% and growing



# Long-Term Consequences of Foodborne Disease

- In most cases of foodborne illness, clinical conditions are acute
- In approximately 2-3 percent of cases, there are long-term consequences
- Examples:
  - ✓ Salmonella and reactive arthritis
  - ✓ Campylobacter and Guillaine-Barré syndrome
  - ✓ E. coli O157:H7 and HUS
  - ✓ Toxoplasma gondii and toxoplasmosis



# What are Consumers Saying about Irradiation Today?



# The Blogosphere

- **Advocacy/”mom”-oriented blogs view irradiation as a dangerous technology that will be used in place of sound food safety practices.**
  - “... Over the last decade food irradiation has been linked with health problems such as cancer, chromosomal damage resulting in birth defects, asthma, diabetes, arthritis, immune weaknesses, ADD and epilepsy.”
  - “If radiation kills harmful pathogens, common sense tells me that it just might be altering the nutrients as well. Why not leave the mass-produced foods on the grocery shelves and head for the local farmers' markets, where locally produced, nutrient-dense, safe foods are available in abundance?”

Source: IFIC, 2009



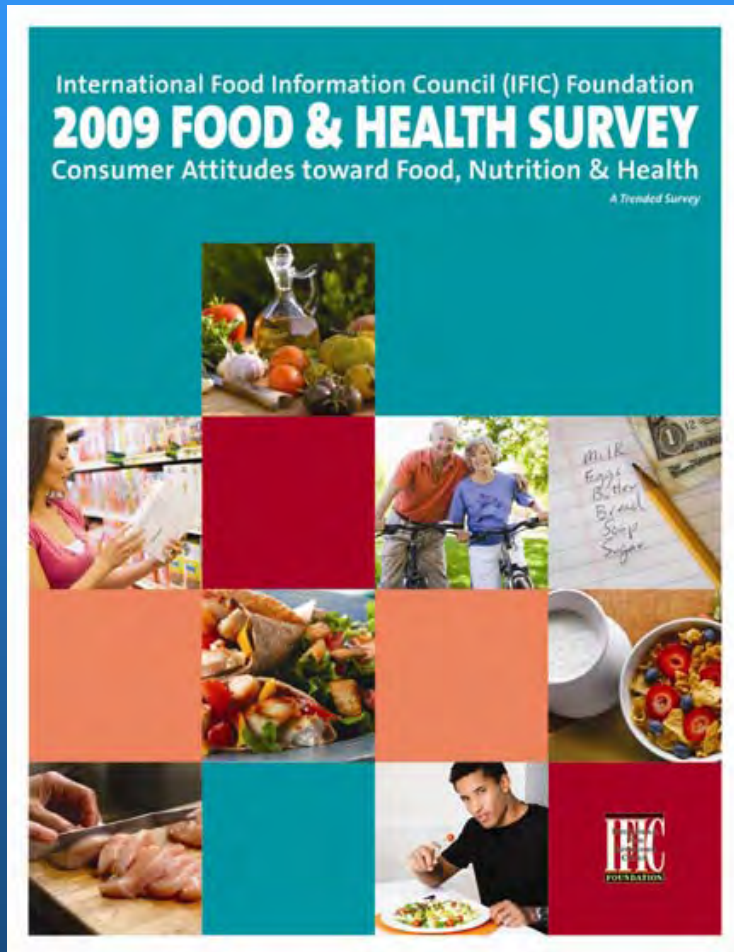
# The Blogosphere

- In early March, several blogs encouraged readers to support action alerts from advocacy groups like *Food Democracy Now!* and *Food & Water Watch* to block the appointment of Michael Osterholm to USDA due to his support of food irradiation.
  - “On Monday, Secretary Vilsack is set to announce the appointment of Dr. Michael Osterholm, a food safety expert, to lead the Food Safety agency at the USDA. According to Food & Water Watch, Osterholm has been “a zealot in promoting th[e] controversial technology (of irradiation) as the panacea to contaminated food. Irradiation allows food processors to nuke disease from contaminated food at the end of the production line, while ignoring the root problems that create unsafe food.”

Source: IFIC, 2009



# 2009 Food & Health Survey



- Quantitative, n=1000
- To be released mid- May
- Questions on irradiation posed for the first time, so no trending available

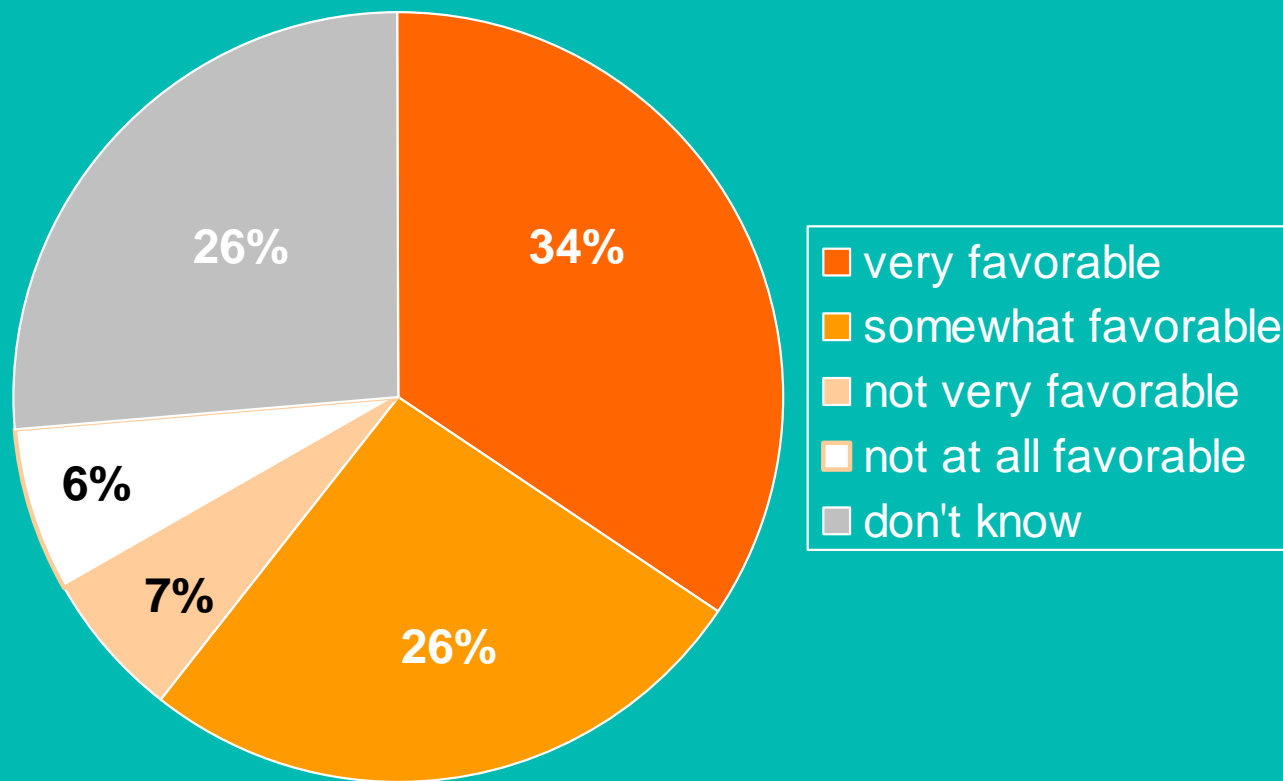




# Food Irradiation

When we say food irradiation, we mean:  
“a process used to eliminate harmful bacteria, such as E. coli and Salmonella, in certain foods.”

# Consumers favorable toward food irradiation

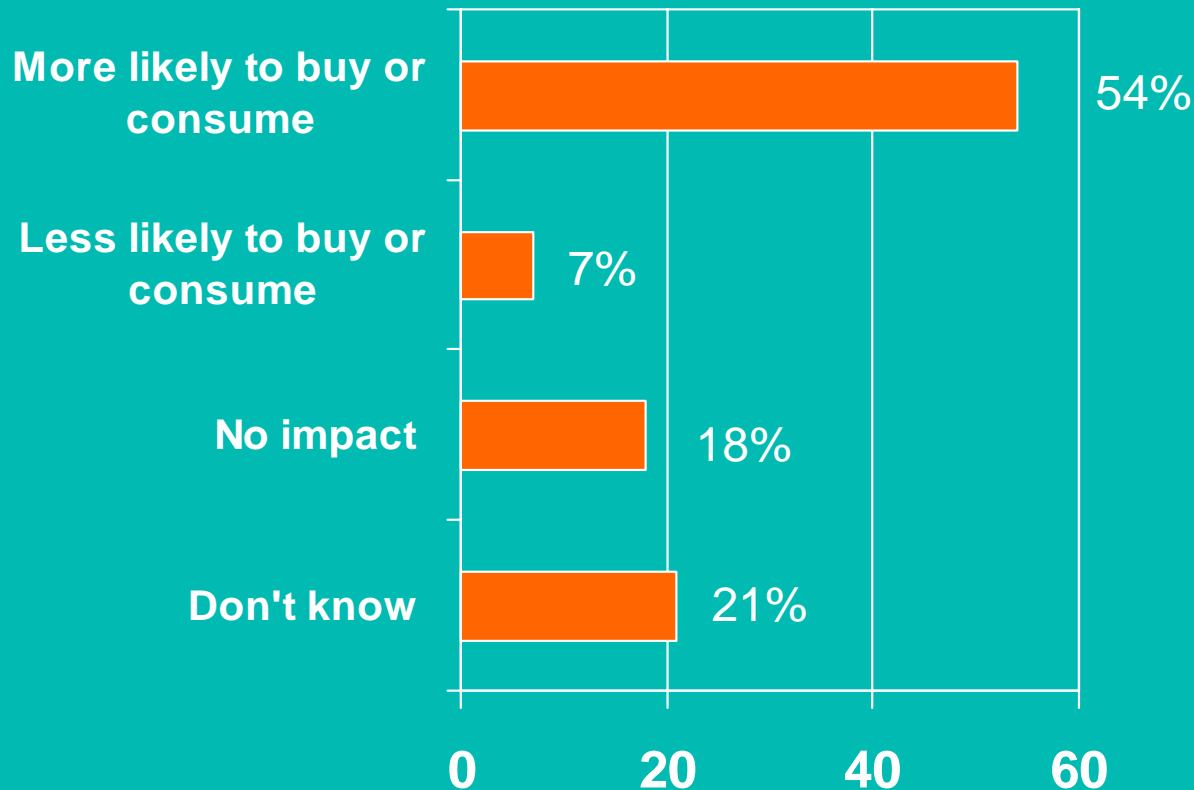


In general, how favorable are you toward the idea of food irradiation?

n=1064

2009 IFIC Foundation Food and Health Survey

# Knowledge of irradiation safety and impact on purchasing decision



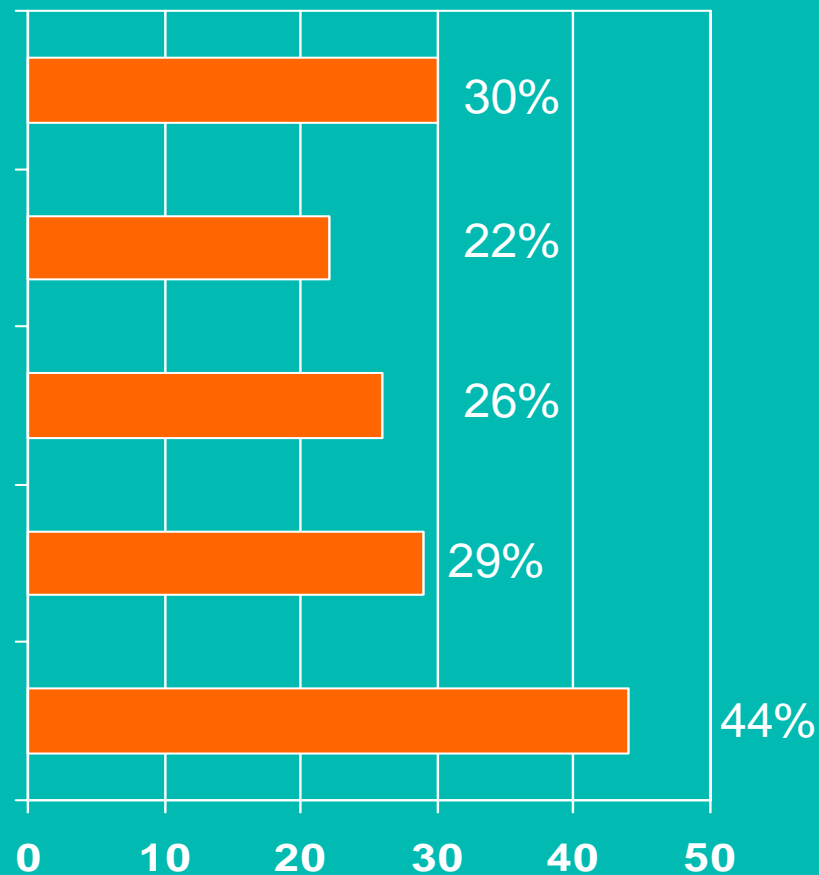
If you knew that irradiated food was safer to eat than non-irradiated food, what impact would that have on your decision to buy and consume the food?

n=1064

2009 IFIC Foundation Food and Health Survey

# New information would not change opinion of irradiated food

- Irradiated foods are not radioactive**
- The FDA has approved food irradiation**
- The process of food irradiation has been approved in over 40 countries worldwide, including the US**
- Food irradiation eliminates harmful bacteria, insects and molds that can make you sick**
- None of the above statements will change my opinion about food irradiation**



ASK IF Q 106=Not favorable (1,2) Which of the following statements, if any, would improve your opinion of food irradiation? *Select all that apply.*

n=143

2009 IFIC Foundation Food and Health Survey

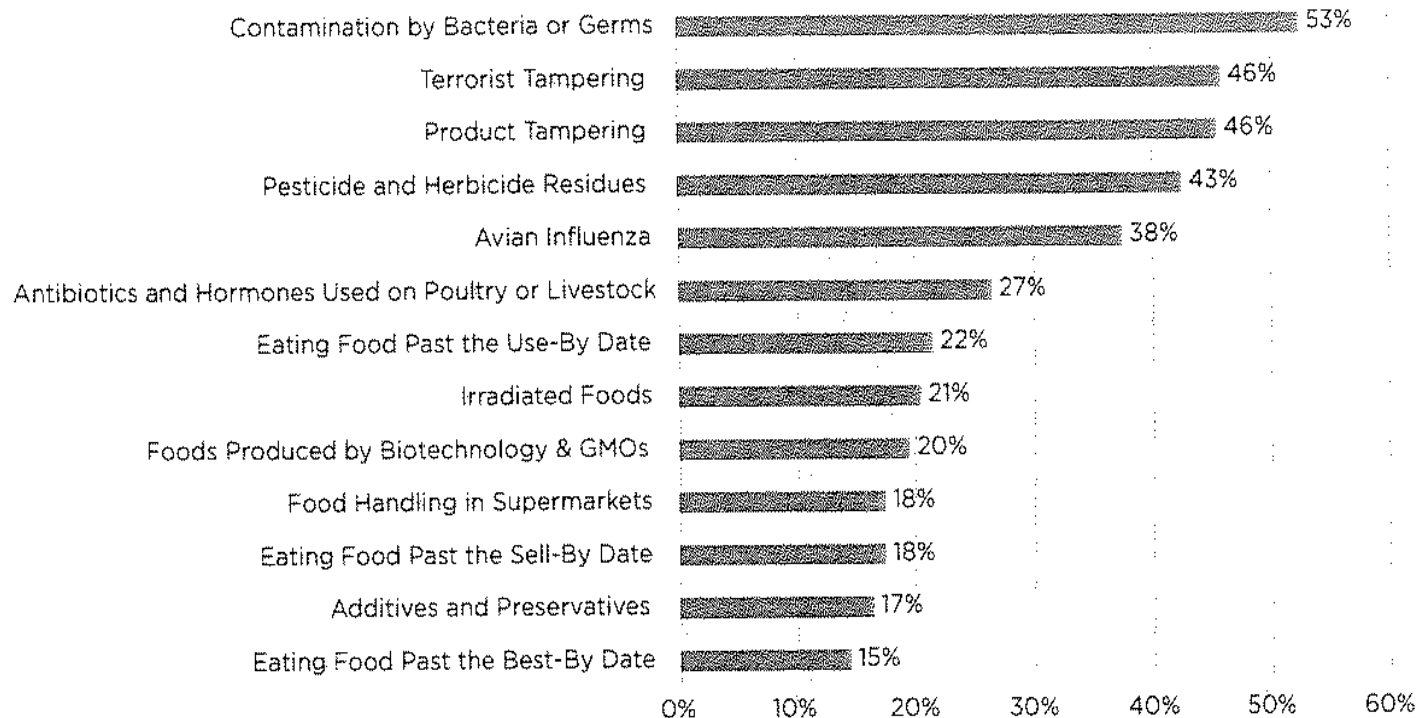
# Preliminary 2009 Food & Health Survey Data on Irradiation

- Favorability is high—approximately 60% are very or somewhat favorable
- More than half of consumers would purchase irradiated foods if they knew they were safer to eat.
- About 1/4 don't have an opinion.
- About 6% won't change their minds, regardless of benefits.



# FMI Trends, 2008

## Health Risks Perceived as “Serious”



# Communication and Education



# Education Important for Acceptance

- Consumer education is critical for acceptance
  - Safety
  - Endorsements
  - Irradiated foods are not radioactive
- Benefits must be emphasized
  - Extended freshness of certain products; delayed ripening, sprouting and spoilage



# Proper Food Handling Still Needed

- Irradiation *complements*, but doesn't replace, proper sanitation practices by producers, processors and consumers
- A few bacteria may survive the irradiation process in meats and poultry
  - Multiplication possible if left un-refrigerated.
- Cross-contamination is still possible
- Irradiation does not replace washing of produce
  - FDA recommends that consumers wash fresh and bagged produce unless pre-washed.



# Food safety practices don't match confidence



# Do Consumers Use Refrigerator Thermometers?

- Partnership for Food Safety Education-2004
  - Only **20%** of consumers say they actually use a refrigerator thermometer
  - Just **30%** have heard they should use a refrigerator thermometer
- Food Marketing Institute Trends-2005
  - **21%** of all respondents say they use a refrigerator thermometer. Just **12%** of respondents age 25-40 said they use a refrigerator thermometer



# Safe Food Handling



[www.fightbac.org](http://www.fightbac.org)

Electronic artwork is available via our web site:  
[www.fightbac.org](http://www.fightbac.org).



# Questions?

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