



Food Safety

NEWS

President creates food safety council

President Clinton has signed an Executive Order to create a President's Council on Food Safety. The president also signed a directive to the council to review the National Academy of Sciences report "Ensuring Safe Food from Production to Consumption," and to report back with its response.

The council's three primary functions are to develop a comprehensive, strategic federal food safety plan; to advise agencies of priority areas for investment in food safety and ensure that federal agencies annually develop coordinated food safety budgets; and to oversee the recently established Joint Institute for Food Safety Research, ensuring that it addresses the highest priority research needs. The council will consult with other federal agencies; state, local and tribal government agencies; and consumer, producer, scientific and industry groups.

Council joint chairs are Secretaries of Agriculture, Commerce, Health and Human Services, and the Assistant to the President for Science and Technology/Director of the Office of Science and Technology Policy. Other members are the Director of the Office of Management and Budget, the Administrator of the Environmental Protection Agency, the Assistant to the President for Domestic Policy, and the Director of the National Partnership for Reinventing Government.

See also:
<http://www.usda.gov/news/releases/1998/08/0346>
<http://www.usda.gov/news/releases/1998/08/foodsaf1>
<http://www.nas.edu>

Food Safety CURRENT NEWS

FDA issues final ruling on juice labels

As you reach for that cold glass of apple juice in the morning, do you ever consider that the refreshing beverage could be deadly?

During the processing of fruits and vegetables into fresh-squeezed juice, harmful bacteria can be present and can end up in your glass of apple juice.

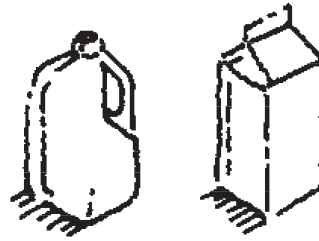
Ninety-eight percent of the juice sold in the United States is pasteurized to kill harmful microorganisms, but two percent is sold unpasteurized. These unpasteurized juices are normally found at cider mills and farm markets, but are not as commonly found in grocery stores.

Untreated juices have been linked to an estimated 16,000 to 48,000 cases of foodborne illness each year.

On September 8, the Food and Drug Adminis-

tration took action to warn consumers about unpasteurized juices.

FDA food labeling regulations now require



WARNING:
This product has not been pasteurized and therefore may contain harmful bacteria that can cause serious illness in children, the elderly, and persons with weakened immune systems.

a warning statement on fruit and vegetable juice products that have not been processed to prevent, reduce, or eliminate pathogenic microorganisms that could be present. The statement informs consumers of the potential risks of

drinking untreated fresh apple juice and apple cider products. All other unpasteurized packaged fruit and vegetable juices are required to have the warning label by November 5.

The label must state: "Warning: This product has not been pasteurized and therefore may contain harmful bacteria that can cause serious illness in children, the elderly and persons with weakened immune systems."

Refer to the Federal Register notice for details: Labeling of Juices, Final Rule, July 8, 1998. <http://>

vm.cfsan.fda.gov/~lrd/fr98708a.html

See also: Critical Controls for Juice Safety; <http://vm.cfsan.fda.gov/~dms/fdjuice.html>

What Consumers Need to Know About Juice Safety; <http://vm.cfsan.fda.gov/~dms/juicSAFE.html>

On the World Wide Web

International Atomic Energy Agency
<http://www.iaea.or.at/worldatom/>

Food Marketing Institute
<http://www.fmi.org/>

The U.S. Department of Agriculture,
 Food Safety and Inspection Service
<http://www.fsis.usda.gov/>

The FightBac Food Safety
 Education Campaign - Partnership
 for Food Safety Education
<http://www.fightbac.org/>

FSIS Food Safety Educator
 Newsletter
<http://www.fsis.usda.gov/OA/educator/educator.htm>

Produce handling, processing risks increase

Outbreaks of human illness associated with raw produce have increased recently in the United States.

Changes in agronomic, harvesting, distribution, processing, preservation, shipping and global marketing have made high quality produce available year round.

However, some of the changed technologies have contributed to the increase in risk for illness from pathogenic bacteria, molds, viruses and parasites. The use of manure, rather than chemical fertilizer, and exposure to untreated sewage or irrigation water containing harmful organisms also contribute to this increased risk.

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Food Safety RESEARCH

Interest grows in food irradiation

Food irradiation has always been a hot topic in the food industry, but there is a new sense of urgency and interest. Preventing foodborne illness and avoiding expensive and massive food recalls is part of the impetus to bring the technology into everyday use. With the recent approval of red meat irradiation by the Food and Drug Administration, irradiation has resurfaced as viable and has caught the public's eye as a means of providing safer food.

So what is food irradiation? It is the process of applying high energy to a material, such as food, to sterilize or extend its shelf-life by killing microorganisms and insects. Sources of ionizing radiation that have been used include gamma rays, electron beams and X-rays. Gamma rays are produced by radioactive isotopes such as Cobalt-60, which is the most common radioisotope source used today. Electron beams are generated by a linear accelerator, which is powered by electricity. Irradiation is measured by the unit known as the "gray" (Gy), which refers to the absorbed dose and is defined in energy terms as a dose of one joule per kilogram of absorbing material.

Food irradiation, a processing technology, has been proven to be a wholesome

process through scientific studies conducted during the past 40 years. This technology dates back to shortly after World War II. Food irradiation began as a result of the "Atoms for Peace" program established by President Dwight Eisenhower in the early 1950s. Based on studies performed by the Office of the Surgeon General of the U.S. Army, the conclusion was drawn that food irradiated with doses up to 56 kGy were safe for human consumption. Numerous products are approved for irradiation: strawberries, wheat, wheat powder, white potatoes, spices, pork and poultry. See chart below.

Just last year, the Food and Drug Administration approved irradiation of fresh or frozen red meats. The approval was based on the FDA's review of worldwide studies conducted on the effects of irradiation on a variety of meat products. The studies included the chemical effects of radiation, impact on nutrient content of irradiated products, toxicity concerns and the effects on microorganisms in or on irradiated products. The established maximum dose for refrigerated meat, meat byproducts, and certain meat food is 4.5 kGy, whereas the maximum permitted dose for frozen meat, frozen meat byproducts

Common Foods Approved by the FDA for Irradiation

Product	Permitted Dose (kGy)	Date	Purpose
Wheat, wheat flour	0.2-0.5	1963	Insect disinfestation
White potatoes	0.05-0.15	1964	Sprout inhibition
Pork	0.3-1	1985	<i>Trichinella spiralis</i> control
Dried enzymes	10 (max)	1986	Microbial control
Fruit	1 max.	1986	Delay ripening, insect disinfestation
Vegetable seasonings	1 max.	1986	Disinfestation
Herbs & spices	30 max.	1986	Microbial control
Vegetable seasonings	30 max.	1986	Microbial control
Poultry	3 max.	1990	Microbial control
Frozen, packaged meat for use in space program	44 min.	1995	Sterilization
Animal feed & pet food	2-25	1995	<i>Salmonella</i> control
Meat, uncooked, chilled	4.5 max.	1997	Microbial control
Meat, uncooked, frozen	7.0	1997	Microbial control

— Olson, D.G., *Food Technology*, 52(1), 1998

and certain frozen meat food products is 7.0 kGy.

The acceptance of food irradiation is in consumers' hands, and they will control the success of irradiated products. A large percentage of adults still have not heard of foods being irradiated to reduce bacteria. A 1998 Food Marketing Institute telephone survey showed that 55 percent of 2,002

respondents would be likely to buy a food product such as strawberries, poultry, pork or beef if it had been irradiated to kill bacteria and keep it safe. Families with children under six (62 percent) and families of five or more (63 percent) are very or somewhat likely to buy irradiated products.



The label of irradiated retail food must state "treated with radiation" or "treated by irradiation" and show the radura, a symbol of irradiation.

Slowly, consumers are gaining knowledge about the benefits of food irradiation and its potential to reduce risk of foodborne disease. Food irradiation, however, is not a replacement for proper handling practices. Irradiation, like other prevention methods, is but one method used to prevent foodborne illness.

— FMI. *Trends in the United States, Consumer Attitudes and the Super-*

market, 1998.

Federal Register, 21 CFR Part 179; Irradiation in the Production, Processing, and Handling of Food, 1997.

Radomyski, T., E.A. Murano, D.G. Olson, and P.S. Murano. Journal of Food Protection, 57 (1994): 73-74

Food Marketing Institute studies views on irradiation

In a study of 1,003 consumers, Market Facts Inc. asked a series of questions about food irradiation for the Food Marketing Institute. Among respondents, 79 percent said they were likely to buy food labeled "irradiated to kill harmful bacteria" for themselves or their children. More than 90 percent said they believe killing harmful bacteria is an important or somewhat important reason to buy irradiated food.

A majority of the respondents said they believe irradiation is very necessary for certain types of food products. Two-thirds said poultry is the product that most needs to be irradiated. Nearly the same percentage believe pork (65 percent) and ground beef (64 percent) need to be irradiated.

Consumers were asked to indicate foodservice settings where irradiated foods would be appropriate. Sixty-five percent named fast-food restaurants, followed by hospital foodservice (62 percent). Less than half indicated that irradiated foods would appropriately be served in grocery store delis (49 percent) or sit-down restaurants (48 percent).

Respondents in this study were most likely to trust medical and health professionals, followed by university experts for information about food irradiation. The news media ranked lowest (51 percent) in terms of trust, but 61 percent indicated a newspaper or magazine article would be the place to turn to seek information to learn more about food irradiation. The same percentage would also use government publications.

Consumers among the 20 percent who said they are not likely to buy irradiated foods have lower incomes, live in smaller households, are more likely to not have any children and are less likely to own their own homes than those who are very likely to buy irradiated foods.

Those who indicated a low interest in purchasing irradiated foods also are less likely to see value in the technology or to trust the sources cited for more information on irradiation.

— FMI. *Consumers' Views on Food Irradiation, 1998.*

Produce Handling

continued from page 2

Changes in the produce industry and consumption patterns, along with increased awareness of fresh produce as potential vehicles for infection, also may contribute to more documentation of produce-related illness.

Contamination of produce can occur in the field or at various points from harvest to the point of consumer contact.

Sources of pathogenic microorganisms on fresh fruits or vegetables include:

Preharvest

- Feces
- Soil
- Irrigation water
- Water used to apply pesticides
- "Green" or inadequately composted manure
- Air (dust)
- Wild and domestic animals (including fowl and reptiles)
- Insects
- Human handling

Postharvest

- Feces
- Human handling
- Harvesting equipment
- Transport containers
- Wild and domestic animals (including fowl and reptiles)
- Insects
- Air (dust)
- Wash and rinse water
- Sorting, packing, cutting and further processing equipment
- Ice
- Transport vehicles
- Improper storage
- Improper packaging
- Cross-contamination
- Improper display temperature
- Improper handling after wholesale or retail purchase

— *Beuchat, L.R. and J.H. Ryu. Emerging Infectious Diseases, 3(4), 1997.*

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Upcoming Events

October 12-13, 1998

Serving Safe Food
Wichita, KS
Contact: Teresa Lang
(316) 722-7721

October 14-15, 1998

Serving Safe Food
Overland Park, KS
Contact: Nada Thoden
(913) 764-6300

November 7, 1998

HACCP Update and Working Session
for Meat and Poultry Processors
Manhattan, KS
Contact: Liz Boyle (785) 532-1247
Kelly Getty (785) 532-0191

November 12-13, 1998

National Alliance for Food Safety
Washington, DC
Contact: Curtis Kastner
(785) 532-1234

January 8-10, 1999

K-State HACCP Workshop
Manhattan, KS
Contact: Liz Boyle (785) 532-1247
Kelly Getty (785) 532-0191

February 5-7, 1999

AAMP/K-State HACCP Workshop
Kansas City, MO
Contact: Liz Boyle (785) 532-1247
Kelly Getty (785) 532-0191

March 3-4, 1999

Second Kansas Conference
on Food Protection
Wichita, KS
Contact: Stephen Paige
(785) 296-0189