Ms. Kaptur: According to a 2000 report invasive species cost the American economy $123 billion annually. While the Department of Agriculture rightly spends millions to contain these bugs, we are charging American taxpayers to both contain the bugs at the border (with APHIS funding) and by passing these costs on to consumers. What steps has APHIS taken to charge importers for the costs of bringing invasive species into the country?

Response: APHIS does not have the authority to hold specific entities, whether individuals, importers, or foreign governments, responsible for pest introductions. APHIS conducts pathway analyses for all newly detected plant pests to determine how they are entering the country and, if possible, their sources. We use the information gathered in pathway analyses to set import policies to prevent the potentially infested commodities from entering the country. In some cases, the commodities or pathways that introduced a pest can be determined. Unfortunately, there are situations where we are unable to identify the exact origin of a pest. If a pest is detected in a suburban neighborhood, an agricultural setting, or wilderness area, there is often no evidence to connect it to a specific source or country. It would be nearly impossible to prove an entity's responsibility for a specific introduction. Importers and travelers do pay user fees to support the Agricultural Quarantine Inspection program. That program's mission is to prevent the entry of invasive species. These fees totaled over $512 million in FY 2010.

TRADE AGREEMENTS

Mrs. Kaptur: While officials at USDA have the scientific background on what it takes to contain pests, trade agreements are written by those who do not see the unforeseen impacts of these agreements on domestic agriculture. Does APHIS provide economic impacts to the Trade Representative on the potential impacts of certain trade agreements related to agriculture?

Response: The Office of the United States Trade Representative has the principal responsibility for administering U.S. trade agreements. Several global trade agreements do have provisions that deal with invasive species issues. These include the North American Free Trade Agreement (NAFTA) and the World Trade Organization (WTO) Sanitary and Phytosanitary (SPS) Agreement. APHIS is delegated responsibility as the primary negotiator for SPS-related trade issues and standard setting involved in animal and plant health issues. The WTO and NAFTA countries agree to base their SPS regulations on international standards. APHIS has the responsibility of establishing SPS requirements that set the conditions for safe international agricultural trade. Trade agreements do not provide for unrestricted imports of agricultural goods into the United States. Because trade agreements typically address broad principles, APHIS does not analyze an overall impact of agricultural trade that may result from an agreement. When a country makes an import request, APHIS does analyze the economic impacts of the requested import as part of the rulemaking process.

As a science-based agency, APHIS evaluates the associated risk with importing agricultural products under SPS standards and takes appropriate mitigation measures. APHIS uses scientifically based processes in reviewing requests to import products to the United States and ensure the safe export and import of agricultural commodities. The process begins with a market access request from a foreign country. As part of the risk assessment process, APHIS evaluates the economic benefits and costs of importing a specifically

requested commodity. The analysis considers the impacts on both U.S. producers and consumers. As part of the rulemaking process, APHIS accepts public comment on proposed rules to ensure that our analysis accurately reflects the anticipated costs and benefits.

INTERNATIONAL AGRICULTURAL TRADE

Mrs. Kaptur: Does USDA conduct potential economic impacts of pests that are related to the explosion of international agricultural trade?

Response: APHIS economic analyses are limited to impacts regarding potential risks and costs associated with specific products from specific countries when considering whether to allow importation of those products.

GRASSHOPPER SUPPRESSION

Ms. Kaptur: While my district has been subject to the devastating effects of the Emerald Ash Borer, once the forests in my district were infected, APHIS simply moved on. Compare that to efforts of APHIS in other states like Wyoming and Montana related to control of species like the grasshopper. As you identify in your testimony, the Department of Agriculture has developed a grasshopper control strategy and according to material that APHIS made available online, USDA will pay the costs of suppression for "100% on federal land, 50% on State Land and 33% on private land." What a deal! While my district has been devastated by Emerald Ash Borer and trees are left to rot in the ground, Wyoming and Montana get huge subsidies. Since 1934, Congress has charged USDA with suppression of grasshoppers on federal land and apparently, according to this document, the suppression of grasshoppers on private land as well. How much money did USDA spend on this suppression strategy?

Response: In regards to APHIS and its role in grasshopper suppression, Section 417 of the Plant Protection Act of 2000 (7 United States Code §7701 et seq.) is the statutory authority for APHIS suppression of grasshopper outbreaks. The Act states "Subject to the availability of funds pursuant to this section, on request of the administering agency or the agriculture department of an affected State, the Secretary, to protect rangeland, shall immediately treat Federal, State, or private lands that are infested with grasshoppers or Mormon crickets at levels of economic infestation, unless the Secretary determines that delaying treatment will not cause greater economic damage to adjacent owners of rangeland." It also specifies that USDA pays 100 percent of the cost of grasshopper or Mormon cricket control on Federal lands, 50 percent of the cost on State lands, and 33.3 percent of the cost on private lands. In FY 2010, Congress appropriated $5,578,000 for this program, and APHIS used an additional $4.2 million in emergency funding from the Commodity Credit Corporation for suppressing grasshopper outbreaks on Western rangelands.

Ms. Kaptur: While grasshoppers, a species that is native to North America are part of the USDA management and control strategy, Emerald Ash Borer, a disease which has cost the Midwest billions is unfortunately outside the control of USDA. I wish the federal government would give my state half the assistance in controlling EAB as it does for western states. In the rush to cut costs should the Congress eliminate funding for Wyoming grasshopper control?

International Journal of Hygiene and Environmental Health
Vol. 205, 1 – 3, 2002.

Susceptibility of children to environmental toxic substances

William W. Au, Ph.D.

Department of Preventive Medicine and Community Health, The University of Texas Medical Branch, Galveston, Texas 77555-1110, USA.

Abstract

Our understanding of toxicity of environmental substances is based mainly on investigations using adult human populations and matured animals. Therefore, the scientific community and regulatory agencies have very little knowledge regarding how children respond to insult from toxic chemicals. However, certain scientific data indicate that children are more susceptible to toxic exposure than adults because they have proportionally more intake of food contaminants, active developmental processes, multiple exposure pathways and susceptible socio-behavioral activities. More emphasis should therefore be focused on addressing the information gap for improving the health of our children.

Introduction

Traditionally, our understanding of toxicity of environmental substances is based on human experience and from studies using experimental animals. The knowledge is therefore generated mainly from studies involving adult human populations (workers) or matured animals. As a result, protection and regulatory standards that are developed from these data are used universally for adults and children. However, concerns have been raised that there can be profound differences between children and adults from exposure to toxic substances. Chemical exposures during childhood or in utero could increase health problems such as cancer during childhood or later in life (National Research Council, 1993; Quang and Woolf, 2000). This concern is supported by the reported increases in rates of brain cancer in children and of testicular cancer in young adults (Charnley and Putzrath, 2001). It becomes clear that the regulatory policies that are developed based on observations in adults are not adequate in protecting children. This led to the signing of the executive order by former president Clinton, Protection of Children from Environmental Health Risk and Safety Risks (Executive Order, 1997). In response to the Executive Order, several regulatory and public health agencies have set up specific programs to address children's environmental health issues.

Health consequences from exposure to toxic chemicals

Numerous studies have been conducted to elucidate how toxic environmental chemicals induce cancer. Therefore, environmental cancer will be used as a model in this

commentary to provide a general explanation on the development of health problems from exposure to environmental toxicants.

Upon exposure to a chemical carcinogen, the chemical is absorbed, distributed and metabolized in various tissues and organs in the body. From the metabolic process, metabolites are produced which may be more reactive than the original chemical or may be inactive. Differences in an individual's ability to metabolize chemicals contribute significantly to variations in toxicological responses to hazardous chemicals. Many of these variations have recently been shown to be due to the inheritance of variant chemical metabolizing genes (Au et al., 2001). The toxicological effects may range from the expression of DNA damage, chromosome aberrations, gene mutation and perturbation of cell proliferation. These effects are known to be some of the initial events in the development of cancer (Greenblatt et al., 1994; Bonassi and Au, 2002).

Children specific activities

Children are more active than adults. As a result, they drink more water, breathe more air and eat more food per pound of body weight compared to adults. Therefore, they are proportionally exposed to more toxic chemicals from the environment and from materials they ingest than adults, making them susceptible to toxicants. Furthermore, children have unique activities and behavior that may increase their susceptibility. The hand-mouth behaviors of toddler put them at risk of ingestion of a variety of contaminated materials. Children are less aware of standard hygiene such as the avoidance of contaminated food and their dietary preferences may cause them to consume a proportionally large amount of a particular type of food. Children are less likely than adults in reading information labels on food products and warning labels. Children have their own social activities. Some activities may involve the consumption of large amount of certain dietary ingredient that can cause overt toxicity, leading to the need for emergency care. An example is the abuse of nutmeg, an aromatic chemical, by a 13-year-old female who ended up in an emergency room in New York (Sangalli and Chiang, 2000). Nutmeg is used as spice for food preparation and, based on conventional assessment, one would not expect the consumption of nutmeg is of health concern.

Age as a susceptibility factor

The embryos, fetuses and children undergo tremendous developmental changes and most of these changes are absent in the adult. These changes involve complex and integrated activities that lead to the expression of unique processes such as differentiation, organogenesis, morphogenesis, rapid and controlled cell division and developmental stage-specific gene activities. How these developmental changes alter children's response to toxicological insult in comparison to adult remains to be elucidated (Faustman et al., 2000). However, in some rare occasions, the age-dependent susceptibility phenomenon has been documented. The carcinogenic activity of diethylstilbestrol is a good example. The standard rodent cancer bioassay would not have predicted the in utero carcinogenic effects of this chemical. Other supportive evidence is from the cancer incidence among the Japanese atomic bomb survivors. The incidences

for leukemia and breast cancer are much higher for those who were exposed to the atomic bomb fall-out at a younger age than those at an older age (Upton, 1984). In the methyl isocyanate accident in Bhopal, India, children are disproportionately affected, as documented in increased seizures, coma and lethality (Mehta et al., 1990). Fetuses and children are much more sensitive to the toxicity of environmental toxicants than adults, as demonstrated in the Minamata Bay, Japan, methylmercury contamination problem (Powell, 1991; Koos and Longo, 1976). It should also be stated that, in some cases, children are less susceptible than the adults.

Contaminants in food can be accumulated in the mother and passed on to the embryos and fetuses via the placenta. In addition, infants are further exposed to the contaminants via the human milk. Certain man-made chemicals that have long-half lives, e.g. polychlorinated biphenyls and organochlorine pesticides, are present in higher concentrations in milk of mothers from industrialized countries than from under-developed countries (Przyrembel et al., 2000).

Physiological differences

Besides differences from adult in the intake of chemicals, physiological differences in the absorption of chemicals via the gastrointestinal track have been documented. For example, young children absorb approximately 50% of ingested lead compared to 10% among adults (Royce, 1992). Detoxification of hazardous chemicals is a critical event in the defense against their toxic effects. However, infants are deficient in such defense mechanism, as most chemical metabolizing enzyme activities evolve within a few days to weeks after birth (Linakis, 1998).

Conclusions

The scientific community and regulatory agencies have very little knowledge regarding how children respond to insult from toxic chemicals. However, certain scientific data indicate that children are more susceptible to toxic exposure than adults because they have proportionally more intake of food contaminants, active developmental processes, multiple exposure pathways and susceptible socio-behavioral activities. Therefore, a national committee has previously stated that "an uncertainty factor up to ten-fold ... be consider ... when data from toxicity testing relative to children are incomplete." (National Research Council, 1993; Landrigan et al., 2001). The recommendation was adopted by the 1996 Food Quality Protection Act with respect to pesticides. In addition, test for prenatal developmental toxicity and the 2-generation reproductive study protocol are recommended for pesticides (Kimmel and Makris, 2001). The Executive Order in the US offers a tremendous stimulus towards a concerted effort in addressing children-specific susceptibility to environmental and ingested toxicants. Since developing countries have significantly more children in the populations than developed countries, the consideration of children susceptibility should be a global concern. These investigations may range from standard toxicological studies to molecular studies on genetic susceptibilities. The investigations should target exposure from environmental contamination and exposure through the food chain. From vigorous evaluation of the

toxicology of chemicals and understanding children' s susceptibility, regulatory agencies will be able to set better guidelines for protecting children's health.

References

Au, W. W., Oh, H.Y., Grady, J., Salama, S., Heo, M.Y.: Usefulness of genetic susceptibility and biomarkers for evaluation of environmental health risk. Environ. Mol. Mutag. 37, 215-225 (2001).

Bonassi, S., Au, W.W.: Biomarkers in molecular epidemiology studies for health risk prediction. Mutat. Res., in press, 2002.

Charnley, G., Putzrath, R.M.: Children's health, susceptibility, and regulatory approaches to reducing risks from chemical carcinogens. Environ. Health Persp. 109, 187-192 (2001).

Executive Order, Protection of Children from Environmental Health Risk and Safety Risk: Executive Order 13045, Federal Register 62, 19885 (1997).

Faustman, E.M., Silbernagel, S.M., Fenske, R.A., Burbacher, T.M., Ponce, R.A.: Mechanisms underlying children's susceptibility to environmental toxicants. Environ. Health Persp. 108, 13-21 (2000).

Greenblatt, M.S., Bennett, W.P., Hollstein, M., Harris, C.C.: Mutations in the p53 tumor suppressor gene: clues to cancer etiology and molecular pathogenesis. Cancer Res. 55, 4855-4878 (1994).

Kimmel, C.A., Makris, S.L.: Recent developments in regulatory requirements for developmental toxicology. Toxicol. Lett. 120, 73-82 (2001).

Koos, B.J., Longo, L.D.: Mercury toxicity in pregnant women, fetus, and newborn infant. Am. J. Obstet. Gynecol. 126, 390-409 (1976).

Langrigan, P.J., Mattison, D.R., Boardman, B., Bruckner, J.V., Jackson, R.J., Karol, M.H., Krewski, D., Weil, W.B.: Comments on "Children's health, susceptibility, and regulatory approaches to reducing risk from chemical carcinogens." Environ. Health Persp. 109, A412-A413 (2001).

Linakis, J.G.: Toxic emergencies in the neonate. In: clinical Management of Poisoning and Drug Overdose (Haddad L.M., Shannon M.W. and Winchester J.F. eds.) W.B. Saunders Company, Philadelphia, PA, pp 277-287 (1998).

Mehta, P.S., Mehta, A.S., Mehta, S.J., Makhijani A.B.: Bhopal tragedy's health effects. A review of methyl isocyanate toxicity. J. Am. Med. Asso. 264, 2781-2787 (1990).

National Research Council: Pesticides in the Diets of Infants and Children. Washington, DC: National Academy Press (1993).

Powell, P.P.: Minamata disease: a story of mercury's malevolence. South Med. J. 84, 1352-1355 (1991).

Przyrembel, H., Heinrich-Hirsch, B., Vieth, B.: Exposition to and health effects of residues in human milk. Adv. Exp. Med. Biol. 478, 307-325 (2000).

Quang, L.S., Woolf, A.D.: Children's unique vulnerabilities to environmental exposure. Environ. Epi. Tox. 2, 79-90 (2000).

Royce S.E.: Case studies in environmental medicine: lead toxicity. ATSDR. U.S. Department of Health and Human Services, Atlanta (1992).

Sangalli, B.C., Chiang, W.: Toxicology of nutmeg abuse. J. Toxicol. Clin. Toxicol. 38, 671-678 (2000).

Upton, A.C.: Hiroshima and Nagasaki: forty years later. Am. J. Ind. Med. 6, 75-85 (1984).

food&waterwatch

Food & Water Watch • 1616 P St. NW, Suite 300 • Washington, DC 20036
www.foodandwaterwatch.org • T: +1.202.683.2500 • F: +1.202.683.2501

March 14, 2008

Chairman John Dingell
House Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, DC 20515

Representative Joe Barton, Ranking Member
House Committee on Energy and Commerce
2322A Rayburn House Office Building
Washington, DC 20515

Chairman Bart Stupak
House Subcommittee on Oversight and Investigations
2352 Rayburn House Office Building
Washington, DC 20515

Representative John Shimkus, Ranking Member
House Subcommittee on Oversight and Investigations
2452 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Dingell, Ranking Member Barton, Representative Stupak, and Representative Shimkus,

I am writing to express concern about your Committee's recent interest in the use of food irradiation to address food safety problems. Food & Water Watch believes that irradiation is an unsafe and impractical technology for dealing with food safety challenges. Rather than promoting this questionable technology, regulators and the food industry should focus on the sources of contamination problems and how to prevent them.

Despite years of promotion from both industry and regulators, Americans have expressed their dislike and distrust of irradiated foods for more than 40 years, since FDA legalized irradiated wheat in 1963. Numerous test-marketing efforts have failed, including irradiated ground beef from 2000 to 2004 and various irradiated fruits in the late 1980s and early 1990s.

At this point, American consumers are not eating much irradiated food. Some meat in the United States is irradiated, but not a large amount. Since 2004, when schools were first offered irradiated ground beef through the U.S. Department of Agriculture's National School Lunch

Program, not a single school system has purchased irradiated ground beef from USDA. Some imported irradiated fruits and vegetables are now making it to store shelves after USDA approved the use of irradiation for pest control for imports. In addition to Indian mangoes, irradiated lemons from South Africa can now be shipped to the United States. Starting in 2007, Thailand was allowed to export irradiated mangoes, mangosteens, pineapples, rambutans, litchis, and longans to the United States. Additionally, the Mexican company Phytosan plans to build two facilities to irradiate tropical fruits for export to the United States, although its plans have been met with significant local opposition. Some spices and seasonings also are irradiated, but many brands available in grocery stores are not.

Health Concerns

The Food & Drug Administration approved food irradiation for many foods in spite of paltry and flawed data on safety and in violation of their own safety protocols. In some foods, irradiation forms chemicals known or suspected to cause cancer and birth defects. Scientists have observed serious health problems in lab animals fed irradiated foods. Those include premature death, cancer, tumors, stillbirths, mutations, organ damage, immune system failure, and stunted growth. In one experiment, genetic damage was detected in young children who ate irradiated wheat.

When certain fats commonly found in food are irradiated, the resulting by-products include a unique class of chemicals called cyclobutanones. Because cyclobutanones have never been found to naturally occur in any food and remain in food for so long, they are used as chemical markers to determine whether food has been exposed to ionizing radiation. The fats that lead to the formation of cyclobutanones are found in many foods that can legally be irradiated and sold to the American public including beef, pork, chicken, lamb, eggs, mangoes, and papayas.

In experiments conducted by German government scientists, one of these chemicals, 2-dodecylcyclobutanone (2-DCB), was shown to cause genetic damage when given to rats and genetic and cellular damage to human and rat cells. Two other chemicals in the cyclobutanone family, 2-TCB and 2-TDCB, were also shown to cause genetic and cellular damage to human cells.

Another area in dire need of more research is the potential for the formation of furans when food is irradiated. As was revealed in the March 12 hearing, the FDA is now concerned about the formation of furans, a known carcinogen, in certain irradiated foods. We attempted to access FDA's data and record on this issue in 2005, but received an incomplete response to our Freedom of Information Act request. Before any move is made to increase the use of irradiation, all information the FDA has on the formation of furans must be made public so the risk can be properly considered or further research needs identified.

Very little testing has been conducted on the safety and wholesomeness of irradiated vegetables. The only vegetables that have been studied to any extent are potatoes and onions and the results of the studies have been mixed. Though in most experiments animals fed irradiated potatoes and onions suffered no apparent health problems, this has not always been the case. Rat offspring died earlier and mice showed chromosome damage after eating irradiated potatoes. These studies

were done with foods irradiated at low doses. No published research is known to exist on whether irradiated lettuce and spinach are safe for human consumption.

A push to irradiate a significant portion of the U.S. food supply would effectively subject the American public to a massive experiment on the long-term effects of eating irradiated foods.

Prevention vs. Treatment of Contamination

Irradiation can mask filthy conditions in today's mega-sized slaughterhouses and food processing plants. Slaughterhouses process up to 400 cows per hour or 200 birds per minute, posing an enormous sanitation challenge and providing opportunities for E. coli, Salmonella and other potentially deadly food-borne pathogens can be spread through feces and cross-contaminated equipment. Instead of encouraging expensive treatments like irradiation, USDA should give their meat inspectors the authority to stop unsafe conditions and the tools to test products at the plant and ensure that contaminated meat never reaches restaurants or supermarket shelves.

Despite Dr. Olson's assertion in the March 12 hearing that "there is no incentive to be dirty" for the meat industry, it is important to note that USDA meat inspectors still routinely find dirty conditions in plants when they start their day. The subcommittee staff has received results of a joint Food & Water Watch/National Joint Council of Food Inspection Locals survey in which 69.6% of inspectors who responded to the survey said that the plants they work in are not always clean at the start of operations. If industry is encouraged or required to use irradiation as the "silver bullet" for preventable contamination problems, there will be no incentive for these plants to be clean.

This is not just an issue for the meat industry. Irradiation will not fix the food safety problems faced by the produce industry. Infected manure from a nearby beef cattle ranch may have been involved in the 2006 E. coli spinach outbreak in California. Instead, testing of water used for irrigation and washing should be improved, vegetable processing plants should be inspected more thoroughly, large livestock operations operating near cropland should be more tightly regulated, and employees processing vegetable should be better trained.

Irradiation Does Not Solve Many Food Safety Problems

Irradiation is not a panacea for all of the things that can make food unsafe. Irradiation does not kill viruses like the Norwalk virus or hepatitis, or prions, the infectious agent that causes bovine spongiform encephalopathy. And while irradiation does kill bacteria, it is not guaranteed that irradiation at the doses used commercially offer complete protection from bacteria. In 2003, *Consumer Reports* magazine tested irradiated ground beef and chicken purchased at retail and found that the irradiated products still contained some bacteria. And irradiation does not offer permanent protection. If irradiated meat is handled improperly or mixed with other products, it can become contaminated. This is why the USDA advises consumers that irradiated meat must still be handled with the same care as all meat to prevent cross contamination and cooked to temperatures adequate to kill any remaining bacteria.

Irradiation is Impractical

Irradiation damages many foods and can ruin their flavor, odor, and texture. The process destroys vitamins, protein, essential fatty acids and other nutrients. When food is irradiated, ionizing radiation reacts with water in the food, causing the release of electrons and the formation of highly reactive free radicals. The free radicals interact with vitamins in ways that can alter and degrade their structure or activity. The destruction of vitamins continues beyond the time of irradiation. Therefore, when irradiated food is stored, it will experience greater vitamin loss than food that has not been irradiated. Cooking further accelerates vitamin destruction in irradiated food more than in non-irradiated food. Vitamin C, vitamin B1, and, vitamin E are reduced in foods exposed to commercial levels of irradiation (1 kiloGray – 4.5 kiloGray). Studies at higher levels of irradiation also have demonstrated the destruction of vitamins A and K.

In addition to destruction of important nutrients in food, irradiation of vegetables can cause serious damage to their palatability. The dose of radiation sufficient to kill bacteria in fragile produce such as spinach could render it inedible. A head of romaine lettuce, for example, was found to be "significantly less firm" when irradiated at doses even too low to significantly reduce bacterial contamination. In another study, a taste panel reported that irradiation ruined the color, firmness and overall quality of romaine lettuce. For vegetables in general, another study found that "irradiation may induce undesirable changes in quality, such as softening, browning, and loss of vitamin C."

Contrary to claims made by many proponents, irradiation cannot legally be used to kill bacteria on vegetables. The Food and Drug Administration in 1986 approved irradiation to kill insects on vegetables and to extend shelf-life. But this approval was for radiation doses that are too low to kill harmful bacteria such as E. coli.

There is no system in place to irradiate large amounts of vegetables and deliver them to market. Today, there are only two operating commercial irradiation facilities, located in Iowa and Florida, specifically designed to irradiate food. Finding hubs for irradiation facilities to treat vegetables produced by farms all over the country would be difficult. And because fresh vegetables have a very short shelf life they very likely could not survive the additional transportation and handling time that irradiation requires.

In addition to logistical challenges, irradiating the U.S. food supply would be extraordinarily expensive and would require thousands of plants. The costs of these facilities and the costs of transporting and handling irradiated food would be passed on to consumers. While the FDA and USDA have estimated that irradiated ground beef should cost an additional 3 to 5 cents per pound, surveys of supermarkets during previous test marketing attempts revealed an additional cost of 50 cents to one dollar per pound for irradiated ground beef products.

During the March 12 hearing, one witness claimed that the higher cost of irradiation is due primarily to transportation. This argument is contradicted by the experience of a now-defunct irradiation facility in Pennsylvania. In 2005, CFC Logistics attempted to operate very close to

the Qualipaq Meat Company that supplied meat to the National School Lunch Program. Despite the short trip to the irradiator, the irradiated ground beef still cost $.30 per pound more than non-irradiated, so school districts chose not to order it.

Irradiated Food Needs Accurate Labeling and Advertising

The Food and Drug Administration is considering a rule change that would deprive consumers of accurate information about irradiation. Their proposal to change the rules for labeling irradiated food would allow it to be labeled as "pasteurized" in some cases and in some cases to be sold without any labeling at all. The agency based this proposal on an incorrect assumption that it is possible to irradiate food without causing material changes to the food. The FDA proposal unnecessarily revises a 1986 decision requiring mandatory labeling for irradiated foods and reflects a fundamental misunderstanding of the 1986 rulemaking, in which the FDA made a legally sufficient determination that mandatory labeling on all irradiated foods is warranted.

There is extensive evidence that irradiation causes material change to food. There is scientific consensus that irradiation depletes or alters all major nutritional components of food, including vitamins, protein, carbohydrates and lipids. These nutritional changes have been associated with organoleptic, functional, compositional, and health-related changes. Additionally, irradiated foods are materially changed by the formation of 2-ACBs, chemical compounds that are not naturally found in any food.

With this proposal, the agency is also ignoring overwhelming public input in support of clear and mandatory labeling of irradiated foods. Both Congress and the FDA have said federal labeling regulations should be based on public input.

In addition to the rules for labeling, advertising claims about irradiated food must be accurate. In 2006, the grocery store chain Wegman's released a worrisome press release that trumpeted the return of irradiated ground beef to its shelves. In it, the company erroneously told consumers that irradiated ground beef didn't have to be cooked to 160 degrees. This contradicts USDA guidance, falsely leading consumers to believe that irradiated meat is incapable of causing disease. Food & Water Watch and Rochesterians Against the Misuse of Pesticides asked the USDA to correct Wegman's risky message to consumers. Agreeing with our concerns, USDA contacted Wegman's with "concerns with the inconsistency of their press release" with USDA guidance that all ground beef – whether or not it has been irradiated – can still contain dangerous pathogens and should be cooked to at least 160 degrees.

Irradiation and Organic Foods

The use of irradiation is prohibited for foods that are USDA certified organic. The dramatic growth in the organic sector is due in large part to consumers' desire to find foods that have been produced without controversial technologies like irradiation and genetic engineering. In fact, in 1998, more than 275,000 people commented to the USDA to object to a proposal that would have allowed the use of irradiation, genetic engineering, and other controversial methods in organic production. This outpouring of public response shows the depth of public opinion about the integrity of the organic standards. Any attempt to mandate irradiation for certain types of

food would not only put the public at unnecessary risk, but would also come into direct conflict with one of the core principles of organic production, the fastest growing segment of the food industry.

Conclusion

Despite the argument by proponents that the safety of irradiation has been studied for over fifty years, many questions still remain about the long-term health effects of consuming a steady diet of irradiated foods. There are no studies to show that, over the long-term, eating irradiated foods is safe. Add in the nutritional damage irradiation can do to some foods and we believe it is far too soon to allow large portions of the food supply to be irradiated.

Irradiation is not the food safety panacea that proponents make it out to be. We are convinced that some in the food industry will sacrifice basic sanitation if they believe that interventions, such as irradiation, can be used at the end of the line to deal with contamination. The bottom line is that consumers do not want to eat feces in their food – whether or not it has been treated with irradiation. An emphasis on irradiation as the only option for dealing with pathogens also neglects the fact that there is already an effective kill step for many foods like meat – cooking – which serves as a much cheaper alternative to irradiation.

Irradiation is not used extensively because consumers have not accepted it. It has failed miserably in the marketplace. Consumers have been able to make informed choices about whether or not to buy irradiated food because these products must be accurately labeled under current regulations. Consumers support the current labeling requirements and the use of euphemisms like "pasteurization" has been rejected in public opinion research conducted by both federal agencies and private groups.

Food & Water Watch urges the Committee to use a cautious approach and not to endorse a technology like food irradiation that is still subject to so many questions about safety and consumer acceptance.

Sincerely,

Wenonah Hauter
Executive Director