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Introduction: Import booms and food safety budgets: the cost to public health

In November 2007, a Bush administration interagency task force report cited an industry-anticipated tripling of U.S. food imports by 2015 to $6 trillion as justification for greater dependence on third-party (neither the export facility nor the regulating agency) certification of foreign export food facilities as conforming to U.S. standards. Actual re-inspection of food at port of entry was dismissed as a “snap shot,” whereas the certification of Hazard Analysis Critical Control Point (HACCP) programs in foreign export facilities would provide a “video” of the whole food safety process. We thought of this analogy of food safety management as a “video” after reading that Cargill has started literally to videotape operations at ten of its U.S. beef processing facilities. Third-party auditors will analyze the video and report to Cargill on the compliance of workers with the plants’ HACCP programs.

Auditing of videos is one of several measures that Cargill is taking after U.S. Congressional hearings on food safety triggered by an October 2009 New York Times article on the 2007 contamination of Cargill Meat Solutions, Inc. ground beef by E. coli O157:H7. Among the E. coli victims is Stephanie Smith, a 23-year-old former dance teacher, who is paralyzed as a result of the food poisoning, and whose medical bills are nearly $2 million after a nine-month hospitalization. Although Cargill admitted liability for the beef contamination in February in a Minnesota court, according to Food Chemical News, the agribusiness giant is apparently laying the groundwork for a legal defense that will blame others in the meat supply chain. Cargill has not paid Smith’s medical bills, but is negotiating a “substantial resolution” with Smith’s lawyers.

Most striking about the Cargill public relations strategy is the claim that over ten years, “Cargill has invested $1 billion in ongoing meat science research and new food safety technologies and interventions.” If Cargill is investing an average of $100 million a year and cannot control E. coli in its U.S. plants, what is the likelihood that the Obama administration’s proposed budget for federal food safety programs—summarized in this issue of Global Food Safety Monitor—will reduce the incidence of E. Coli and other pathogens?

As the parties to the negotiation of these budgets and their program justifications are painfully aware, the $12-trillion-plus (according to www.nomiprins.com) bailout of Wall Street and the $2-trillion-plus wars in Iraq and Afghanistan have caused Congress and the president to prioritize cuts to the federal budget. The next big food safety shoe to drop will be a Centers for Disease Control report on the annual incidence and costs of U.S. food-borne illness. The annual cost of $152 billion, estimated by former FDA official Robert Scharff in a report summarized in this issue, is based partly on figures from the last CDC food-borne illness report in 1999 and based on 1997 data—well before the U.S. food import boom.
The more than two year delay in the CDC report’s release may be partly the result of an interagency fight over the report methodology, since as Scharff notes, the FDA and USDA use different methodologies to calculate the cost of food-borne illness. Both the food industry and the U.S. government are desperate to show that despite large food product recalls—e.g., a nearly 5-million-pound hamburger recall in February—de facto industry self-regulation through HACCP has reduced food-borne illness. A CDC report showing a rumored nearly 50-percent reduction since the 1999 report would bolster claims that HACCP will reduce food safety problems in foreign export facilities. As is reported below, the U.S. is extending HACCP to China and other major exporters to the U.S. in lieu of port of entry inspection and testing. Given the plan of U.S. food companies to rely increasingly on imports for the U.S. food supply, the CDC report will have big consequences for trade-related food safety.


Modest to a fault: U.S. food safety budgets

The hope that the Obama administration would reverse 30 years of underfunding of regulatory agencies (and concomitant deregulation) was dealt a severe blow on February 1, when the Office of Management and Budget released its proposed budget to take effect October 1, 2010. The proposed budget implements President Barack Obama's intent to freeze aggregate non-military and non-security budgets at least through Fiscal Year 2013, i.e., until September 30, 2014. However, $79 million of the U.S. Food and Drug Agency's (FDA) $146 million budget increase would go to its food safety program. The increase is less than a tenth of the food safety budget doubling called for by FDA's Science Board Subcommittee on Science and Technology in February 2008.

However, the $79 million increase in the overall $2.5 billion FDA budget nevertheless could pay for more inspectors and testing laboratories, particularly at ports of entry where FDA has only about 200 inspectors for about 300 ports, according to November 1, 2007 Congressional testimony by former FDA official Benjamin England. Under the proposed budget, there is a $24 million increase for the FDA to inspect foreign export facilities and negotiate agreements of "equivalence" between U.S. and foreign food safety standards and practices. The food safety program budget would increase substantially if Congress were to approve $220 million in proposed food facility registration fees. The fees would enable inspection of more foreign food export facilities and defray the cost of issuing 37,000 food and feed export certificates a year. FDA regulated importers currently oppose the user fees and industry lobbyists have defeated past Congressional bills to impose user fees.

The USDA's Food Safety Inspection Service (FSIS) is scheduled to receive a 1.6 percent increase over FY 2010, from $1,140 million to $1,158 million. The increase is unlikely to reverse the fall in FSIS staff from 10,000 in the late 1980s to 9,200 today. The $18 million increase is not enough to cover cost of living adjustments and likely is a prelude to laying off inspectors and reducing inspection. USDA anticipates an increase from 5607 in FY 2010 to 5741 slaughterhouses and meat processing plants in FY 2011 whose products FSIS is required by law to inspect and approve as safe and wholesome for consumption. However, the budget for import re-inspections fell to just $16 million, with the result that U.S. consumers will be relying evermore on exporting countries' inspection services. Imported meat, eggs and poultry tripled between 2002 and 2009. The American Meat Institute rejected the Obama administration proposal to raise $12.6 million through FSIS domestic plant and importer inspection fees, calling it a "tax" that the meat industry will pass on to U.S. consumers.

China retools food safety program: USDA anxious to import Chinese poultry

In early February, Chinese Vice Premier Li Keqiang told the first plenary session of the country’s food safety commission, “We should understand the foundation for the country’s food safety is still weak and the situation is grave. We should fully realize that it is a pressing issue to ensure food safety.” What prompted the statement and appearance of the Vice Premier, rather than a lower level official, was the discovery of yet another wave of melamine-adulterated dairy products. In 2008, the industrial chemical, used illegally to increase protein content in milk, killed six children and sickened more than 300,000. Some of the recalled powdered milk that was to have been destroyed is believed to have been repackaged and sold. In early March, three officials of the Panda Dairy Company, one of several involved in the 2008 contamination, were sentenced to three to five years in prison. All denied responsibility and will appeal their convictions. Also in early March, officials from four provinces blamed each other for failing to prevent the sale of cowpeas contaminated by an illegal pesticide.

The resurgence of melamine contamination occurs during a contentious moment in U.S.-China food safety diplomacy and puts in doubt Chinese capacity to implement and enforce its new food safety laws. A February 22 letter from USDA Secretary Tom Vilsack to members of Congress lists multiple requests from FSIS to Chinese counterparts for information necessary for the Secretary to make a determination of equivalence between U.S. and Chinese food safety legislation, regulations, implementation and enforcement. Certification is required by law in order for U.S. firms to begin importing U.S. poultry carcasses, further processed in China to save U.S. importers labor and regulatory costs. At a February 24 House of Representatives hearing, Representative Rose DeLauro charged that USDA was seeking to grant China a certificate of food safety equivalence to enable the export of Chinese poultry and thereby relieve U.S.-China trade tensions.

Chinese officials have insisted that they have provided all the information necessary for FSIS to make an equivalence determination, which requires both a documentation review and audit of export facilities. Despite repeated denials of the request for information, FSIS has not terminated the equivalence process, as it may do according to the guidelines of the Codex Alimentarius Commission, whose standards the World Trade Organization deems to conform to WTO agreements. In July 2009, China had filed a complaint with the WTO that the United States was unfairly discriminating against its poultry exports.


Risky business: reporting violations of U.S. law

U.S. Department of Agriculture food safety programs are designed to prevent contamination and other hazards before they occur. The system relies on FSIS supervisors following up with enforcement measures that respond to their employees’ reports of meat processing plant non-compliance with federal rules. But FSIS supervisors routinely overrule employees when meat and poultry manufacturers complain that FSIS employees are too zealous about upholding the law. Such was the conclusion of a March 4 hearing of a U.S. House of Representatives subcommittee hearing into allegations that FSIS officials had repeatedly ignored reporting by Dean Wyatt, an 18 year FSIS veterinarian, of violations of U.S. law in the handling of animals in slaughterhouses. For example, live pigs shackled to a conveyor line were slaughtered kicking and squealing, rather than be first stunned insensible, as required by law. In American parlance, Wyatt "blew the whistle" to expose illegal practices, and is now represented by the Government Accountability Project, which specializes in the legal defense and publicizing of whistleblower cases.

Wyatt had reported violations in six separate incidents of livestock abuse at Seaboard Farms in Guymon, Oklahoma. Both Seaboard and FSIS dismissed his concerns and FSIS management issued him a reprimand, ordering him to reduce his time spent on oversight of animal handling. After reporting violations in the sixth incident, Wyatt was threatened with termination unless he transferred to another plant. He transferred to the Bushway veal processing plant in Grande Isle, Vermont, where he likewise
observed and reported animal abuse to his superiors. Following Bushway management complaints, FSIS ordered Wyatt to take remedial training courses, an insult to his professional reputation. Bushway was shut down in November following broadcast of Humane Society of America undercover video footage that confirmed Wyatt’s reporting. Five minutes of the footage were played at the House hearing. Wyatt is a witness in a USDA Office of the Inspector General criminal investigation of the Oklahoma plant.

General Accountability Office (GAO) official Lisa Shames in effect rebutted USDA official Jerry Mande’s claim that the abuse observed by Wyatt was an exception to the rule. GAO had surveyed a random sample of 235 FSIS inspectors in charge, a 93 percent response rate, from May to July 2009. GAO also reviewed veterinary reports and non-compliance reports from all 15 FSIS district offices from 2005 to 2009. GAO concluded that FSIS management lacked a plan and dedicated resources to enforce the Human Methods of Slaughter Act (HMSA). GAO said that less than one percent of the FSIS inspection budget was dedicated to HMSA enforcement. Based on the anonymous interview survey and review of FSIS reports of incidents when plants should have been shut down following reporting of livestock abuse incidents but were not, GAO concluded that FSIS enforcement was inconsistent. For example, although electronically prodding livestock in the rectal area is a clear violation of the HMSA, only 32 percent of the FSIS inspectors surveyed said that they would suspend plant operations as a result of the violation. USDA doubted that the survey results demonstrated systemic inconsistencies in enforcement. Nevertheless, USDA’s Mande said that USDA would create an ombudsman’s office where FSIS staff could report violations anonymously without fear of management or packing plant retaliation.

Stan Painter, head of the National Joint Council of Food Inspection Locals, which represents 6,500 FSIS inspectors, told the subcommittee that “We don’t have the ability to do our jobs. We’re given conflicting orders from one day to next,” charging that FSIS management routinely pulls slaughterhouse inspectors from observing animal handling to do carcass inspection and paperwork review. Under international trade rules, violation of livestock abuse laws is not a valid reason to suspend trade in meat and poultry products. WTO members, including the United States, have resisted the attempt of the European Union to negotiate rules on trade related animal welfare.


Resources


The headline number in this sobering and meticulous study is $152 billion. That is the annual estimated cost of medical bills, public health expenses and lost income for U.S. consumers afflicted with acute foodborne illness. (“Acute” is not defined, but Scharff’s cost categories indicate that medical care, including hospitalization, is encompassed in the term.) The estimate also includes costs to society in the form of insurance payments; quality of life losses resulting from death, disability, pain and suffering; and, to some extent, the costs of long term health care. This estimated cost of food-borne illness in the United States does not include the cost of food product recalls, nor the cost of lost reputation of those companies that manufactured and distributed contaminated food.

Scharff, a former U.S. Food and Drug Administration economist, develops his methodology primarily from FDA estimation models. He notes that the U.S. Department of Agriculture estimate methodology excludes the cost of economic losses due to pain, suffering and functional disability. Because the agencies justify the costs of their food safety programs in part on their prevention of estimated economic losses and because the majority of bacterial causes of contaminated food is under USDA authority, the economic methodology difference between the agencies is an important public policy matter not directly addressed in this study.
Among Scharff's many very helpful contributions to providing an economic rationale for designing food safety program budgets is the disaggregation of data in terms of specific bacterial, parasitic and viral agents. Scharff notes, however, that the largest causality category by far is that of "unknown agents," which account for nearly $96 billion of the annual $152 billion estimated cost to the public. He is too discreet to say so, but the lack of mandatory FDA and USDA product recall authority, the weak capacity of both food manufacturers and federal authorities to trace back the origins of adulterated food, and the increasing self-regulation of the food industry are among the factors that have contributed to the preponderance of the "unknown" in food-borne illness. Also remarkable is the high annual cost of food-borne illness originating in the contamination of fruits and vegetables: $39 billion—mostly by pathogens of animal origin. Finally, the study breaks down food-borne illness costs on a state-by-state basis, and finds that there are considerable per capita differences in costs due to what states are willing and able to spend to treat food-borne illness.

"Nanotechnologies and Food," Volume I, United Kingdom House of Lords Science and Technology Committee, January 8, 2010.

This first volume summarizes the evidence compiled in the second volume and makes recommendations to the British government and the European Commission concerning the product development, regulation and commercialization of foods and food packaging materials that incorporate nanoparticles. Nanotechnology concerns the manipulation of matter at the molecular level. For example, the diameter of a human hair is about 80,000 to 100,000 nanometers. Parliamentary committee investigators interviewed a wide array of British, European, U.S. and international government and industry officials, and academics. Most of these are cited by name, and on the basis of a review of their testimony and relevant literature, the Committee made 32 recommendations.

The Committee is sympathetic to nanotech product development and welcomes the UK government's creation of a venture capital fund open to the small companies that make the majority of advances in nanotechnology development, since private capital has been unwilling to take the investment risk. The report is, however, critical of the food companies and government officials who have failed to provide, even anonymously, basic information about their product development to enable assessment of possible health, safety and environment risks of nanoparticles in food. For example, the committee asked the United Kingdom's Food Standards Agency (FSA) about its commissioning of research into the "fate of nanomaterials in the gut." FSA was unwilling to tell the committee how many applications it had received to do the research. The committee remarked that "this is unnecessary and inappropriate secrecy."

Because food manufacturers, who have had nanotechnology projects ongoing since 1999, have not responded to government requests for a voluntary submission of nanotech product information that can be used to conduct risk assessments, the committee recommends the creation of a "confidential database of nanomaterials being researched within the food sector." Industry participation would be mandatory. Although industry officials said that the extent of nanomaterial use in food has been overstated, in the absence of an official product registry, it is exceedingly difficult for governments to prioritize research investments into the risks of nanomaterials in foods. In the United States, where companies are allowed to determine which products are generally recognized as safe (GRAS), it is possible, according to a General Accountability Office report, that companies would declare their nanoproducts GRAS, rather than submitting them for a formal pre-market safety assessment.

Most academic studies of the health, safety and environmental effects of nanomaterials have focused on the lungs, rather than on the gastro-intestinal tract, from which blood could carry harmful substances to other parts of the body. But the scientists interviewed and literature reviewed point to very worrisome effects, such as the uptake of nanomaterials into the gills and guts of fish. An external review of UK government plans to research the health effects of nanoparticle absorption finds a lack of progress after four years that the committee calls "extremely concerning," (35). Unfortunately, this lack of progress is replicated outside of the United Kingdom, despite the billions of dollars that governments are investing in basic nanotechnology research and product development. We should, however, be grateful for this parliamentary inquiry to show what we don't know and aren't investing to know, since what we don't know can not only kill us but could kill nanotechnology product development and its promised benefits.

Food safety will be just one of a couple dozen agenda items in Geneva at the World Health Assembly in May. However, according to a WHO secretariat report, “the spread of pathogens and contaminants across national borders means that food-borne diseases now threaten global public health security.” WHA delegates will amend and approve—or not—WHO proposals to remedy an increase in global food-borne illness, as estimated by WHO monitoring systems. The secretariat report calls for all segments of the food supply chain to be engaged in food-borne illness prevention “given that risks to food safety may originate in any link in the food production chain, including the environment, animal feed, the farm, production and retailing, preparation practices and the consumer’s kitchen.”

The WHO’s executive board meeting, January 19-23, reviewed WHO’s food safety work in the decade since the WHA resolved to make food safety an urgent public health program priority and since WHO started in 2002 to implement its global food safety strategy. In addition to reviewing the performance of WHO food-borne illness information and monitoring systems, the WHO executive board urged various forms of WHO member government cooperation with WHO staff. Food safety has long been a component of the WHO understanding of food security, since contaminated food should not be consumed and widespread food contamination increases food insecurity.

According to the United Nations Food and Agriculture Organization (FAO) the global number of hungry people in the world has increased by 200 million since 2006, to nearly a billion or about one of every six people on the planet. In the rush to provide humanitarian food assistance to mitigate the effects of hunger and prevent the food riots that afflicted more than 30 developing countries in 2008, the safety of the food assistance is often forgotten, particularly regarding the safety of the water used in food preparation. Therefore, the executive board called on governments “to enhance the integration of food safety considerations into food aid, food security and nutrition interventions in order to reduce the occurrence of food-borne diseases.” The board likewise urged the WHO Director General “to promote the inclusion of food safety into the international debate on food crises and hunger emergencies, and provide technical support to Member States and international agencies for considering food safety, nutrition and food security in a comprehensive, integrated matter.” The WHA delegates will further consider in May how to ensure that food aid responding to food shortage emergencies does not itself create food safety emergencies.