

Strategy and Policy in the Food System: Emerging Issues

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**PART FIVE: Avenues for Improving
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**21. A Consumer View on Improving
Cost/Benefit Analysis: The Case of
HACCP and Microbial Food Safety**

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A Consumer View on Improving Cost/Benefit Analysis: The Case of HACCP and Microbial Food Safety

*Caroline Smith DeWaal*¹

Good afternoon. I am Caroline Smith DeWaal, director of food safety for the Center for Science in the Public Interest. Before I begin, let me tell you a little about CSPI. We are the people who told you the surprising facts about the fat in movie theater popcorn, Chinese food, Mexican food, and deli sandwiches. CSPI just celebrated its twenty-fifth anniversary. We have a budget of \$13 million, and a staff of 50 people including scientists, nutritionists, and lawyers with expertise in nutrition, food labeling, and food safety. We have approximately 750,000 members who subscribe to our Nutrition Action Healthletter.

Cost/Benefit Analysis: Its Bad Reputation

Let's face it. Cost-benefit analysis, risk assessment, and the entire panoply of new economic tools for evaluating regulations have a bad reputation among consumer and environmental advocates. There is suspicion that these tools are just an attempt to put private interests before the public interest. I'm sure we would all agree that there is no instance in which private profits should justify the allocation of cancer, death, or birth defects in a population. But that is what many in my community suspect is the function of cost/benefit analysis.

Short-term costs to industry and the government can easily be measured but it is much more difficult to measure the long-term benefits of avoiding getting cancer, having a family member with a chronic illness, or raising a child with birth defects. In the area of meat and poultry safety, the benefits have been somewhat easier to measure because we have more acute and fewer chronic outcomes. The loss of a child to the deadly strain of *E. coli* bacteria. . . . The costs of hospitalization for a *Salmonella* infection These are certainly measurable, but is that what we really want? Shouldn't we really strive not to weigh the costs of regulation against human life or health but to design regulatory systems that provide the maximum standard for safety at an affordable cost?

What Consumers Want

I won't lie to you. Consumers want safe food. They don't care what hoops we have to jump through to get there. They want it and they expect it. And that is why consumer education is so important, just to constantly remind consumers that we don't have what they really want.

But there is a level of safety that is reasonable to expect. If consumers properly handle and cook their food, or if they order it from a restaurant, it should be safe to serve to their families. Under normal

conditions of preparation, food that has been inspected and stamped wholesome by the government should not contain enough bacteria or other contaminants to make consumers or their family members seriously ill—or even kill them. Food should not maim people or result in injury that seriously impairs their quality of life.² While consumers clearly have a role to play in assuring the safety of the food they purchase and prepare, it is no longer acceptable for processors to rely on consumers to make dangerous products safe.

Consumer confidence in meat and poultry products has never recovered from the Jack in the Box outbreak in January 1993. This outbreak demonstrated that the current meat and poultry inspection system does not meet consumers' expectations. In a recent poll conducted by the Associated Press, 52 percent of consumers identified bacterial contamination as "the most serious health hazard" in food. Fat garnered 28 percent and pesticides garnered 16 percent (Associated Press 1996). In another survey, 90 percent of supermarket shoppers polled were concerned about meat and poultry inspection (Consumer Network 1995). Sixty-eight percent of the general public believes that rules governing food safety are not tough enough (Creswell et al. 1995).

Since 1993, nearly 100 outbreaks from *E. coli* 0157:H7 in 37 states have been identified by Safe Tables Our Priority, the group formed by families who have lost family members or friends from contaminated meat. These continuing outbreaks are just the tip of the iceberg. CDC reported that there were more than 43,000 cases of Salmonellosis reported in 1994 and cases of Shigellosis and Hepatitis A, both of which can be foodborne, totaled more than 50,000 cases (Center for Disease Control 1995). Most experts believe that somewhere between 7 and 33 million foodborne illnesses occur each year, only a small fraction of which are reported to CDC. Clearly there is a lot of room for improvement.

Focusing on bacteria is only one part of the food safety equation, however. Food safety problems can be broken into three major categories: microbial hazards, chemical hazards, and natural toxins. To control these hazards requires extensive control systems, both in industry and the government. Chemical hazards can include pesticide residues on plants, hormones in meat, and heavy metals in fish. Record keeping can play a role in preventing these hazards but almost any control scheme will have to include residue testing. Natural toxins also require a laboratory testing regime, coupled in some cases with process controls. Microbial hazards require an extensive process control system that is verified using laboratory sampling. For all these risks, it is time to come out of the dark ages, and to start making smart use of the testing technologies modern science makes available.

Appropriate Roles for Industry, Government, and Consumers

Doing cost/benefit analysis is very popular in Washington these days, so let's run through a quick one on meat and poultry safety, just to see how the numbers stack up. USDA has conservatively reported that there are seven million cases of foodborne illness in the U.S. each year and up to 7,000 deaths. Of these, nearly five million cases of illness and 4,000 deaths may be associated with meat and poultry products contaminated with harmful bacteria. Virtually all observers believe these figures may be low. At least one investigator has estimated that the total number of cases of foodborne illness may reach 33 million a year with up to 9,000 deaths.

The Department of Agriculture estimates that the annual cost of foodborne illness in this country ranges from \$5 to \$6 billion, with \$4 billion attributable to meat and poultry products alone. These costs are being borne by consumers and the health care system, and they make the number of taxpayer dollars invested in the food safety inspection programs seem small by comparison.

The Food and Drug Administration (FDA), which spends more than \$200 million regulating foods, has a food safety inspection program which is marked by a lack of resources and infrequent inspections while USDA spends over \$550 million to provide comprehensive regulation and inspection of meat and poultry plants, but has a program that fails to address many of the pathogens that make people ill.

Yet, even minor investments in improving the safety of food products can result in significant savings to consumers. For example, costs associated with the USDA's proposed mandatory HACCP proposal were estimated to be less than \$250 million per year, with expected savings for consumers of \$1 to \$3.7 billion.

But, let's face it, when consumers become ill from contaminated food, they think about their health and well-being before their checkbook. Protecting public health—not the cost of illness—is the real issue here. I believe that most people in the food industry want to produce the safest possible product, even if it costs them money and time to do it. After all, reduced consumer confidence in meat and poultry products has had a tremendous cost. And we only need to look at the BSE situation in the United Kingdom to see an industry practically decimated from a public health scare. As I have been told over and over again by members of the meat and poultry industry, poisoning your customers is not the formula for repeat business.

The question is how to do it. Is there technology available that will make raw animal protein products safer? Will HACCP work to assure safer products?

Food safety systems that use HACCP rely on the industry to identify and monitor processing controls for food processing plants. However, to ensure the system is operating to protect consumers, the system must be designed to balance industry's role with appropriate regulatory oversight, including inspection, verification, and enforcement. In the absence of adequate government oversight, HACCP will simply revert to an industry honor system, one not worthy of public confidence.

Managing Mandatory HACCP

Low acid canned food demonstrated that HACCP can work very effectively to improve the safety of highly processed foods that utilize processing techniques that destroy pathogens. HACCP provides assurance that the processing techniques are properly implemented to produce the desired outcome.

HACCP is less trustworthy for raw products with a high incidence of contamination. You need only step into a meat or poultry processing plant to understand the complexity of controlling pathogens in that environment. Even for some of the top industry scientists, figuring out how HACCP works to control pathogens on raw products is a challenging assignment. But with the necessary motivation, I am confident that HACCP will prove to be effective for these plants and these products.

The government is similarly optimistic and, taking the advice of many HACCP proponents, is mandating its use for raw products, like meat, poultry, and seafood. The problem with this approach is that not all plants are up to the challenge and, for many, HACCP alone could be little more than a paperwork exercise with little public health benefit.

Many scientists and other proponents have proposed that in mandating HACCP, the government should put its faith in the design of the system and set up "pure HACCP systems," without mandatory end product testing to verify that HACCP is actually working. This would be nothing less than a grand experiment at industry and consumer expense.

Consumer groups have asked that accountability be designed into HACCP systems. In other words, the systems should be subject to rigorous laboratory testing to assure that they actually deliver on what they promise, a safer raw product. This takes the guesswork out of the system. We will know whether HACCP is working based on actual testing data and if it isn't working, we can end the experiment sooner rather than never.

There is significant support for the proposition that microbial testing should be a part of HACCP verification. At scientific and technical conferences and at numerous meetings sponsored by USDA, scientists agreed that testing was an important tool for HACCP. In fact, testing is currently being used by the two largest meat slaughter and packing companies to evaluate HACCP in their plants. These companies have shown us the importance of laboratory testing as a HACCP management tool. The

companies are each evaluating HACCP over a large number of plants, and they use laboratory testing to evaluate its effectiveness.

This is another reason why mandatory testing is important in a government-mandated HACCP system. Regulators also need an evaluative tool to check HACCP over a large number of plants.

The Role of Cost Benefit Analysis

Despite the consensus about the role of laboratory testing in HACCP, in the weeks that have become months needed to finalize the meat and poultry HACCP rule, the issue of microbial testing has become increasingly controversial. Government analysts point to the gaps in data and say that the government really doesn't know enough to mandate some aspects of the microbial testing regime. But this is an example of how cost/benefit analysis and risk assessment can actually do a disservice to public policy.

Clearly data gaps exist. Despite nearly 10 years of continuous urging by the National Academy of Sciences and others, the USDA studiously avoided collecting information about pathogens in meat and poultry products until very recently. Consumers should not pay for that studied ignorance.

We do know that the plants that are using HACCP, and trying to evaluate its effectiveness among a large number of plants, use laboratory testing. This is an example of where the industry practice should take precedence. In the absence of perfect data, we can take a lesson from the leaders in private industry.

Whatever system USDA comes out with to address pathogens in meat and poultry products will not be perfect. As the systems are implemented and new data are gathered, they will need adjustment. But an imperfect system is better than no system and total governmental gridlock in the face of a widely recognized public health concern.

I started these remarks outlining the suspicions that many in the consumer and environmental community harbor about cost/benefit analysis and the other tools of economists in evaluating regulations. There is another suspicion that cost/benefit analysis and risk assessment is really about tying the government up in knots and stopping activist regulators. It has been over three years since the Jack in the Box outbreak sickened 700 people and killed four children. Outbreaks continue to occur and children continue to die. We need some activist regulators, but instead we only see the impact of these new tools. The rule promised to us in December 1995 is still tied up in its second round of cost/benefit and risk assessment evaluations in June 1996. The clock is ticking and we are on the verge of another summer of outbreaks from the deadly *E. coli* bacteria. Meanwhile our government does nothing.

Notes

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²While industry representatives assert that the vast majority of foodborne illness is caused by improper preparation of food products by the consumer or food service establishment, this is a gross oversimplification. According to the National Academy of Sciences:

Although the final abuse that leads to outbreaks mostly occurs after the food has been processed, many outbreaks would not have ensued if the pathogen were not already on the meat or poultry after slaughtering or processing. Outbreaks rarely result from direct inoculation of contaminants by food handlers at the point of preparation or serving (National Academy of Sciences 1985: 24).

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