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POISONING PEOPLE

A government, for protecting business only, is but a carcass, and soon falls by its own corruption and decay.

—Amos Bronson Alcott (1799–1888),
Transcendentalist writer and philosopher

It was exciting. Bill Clinton had been elected president and the future held promise for tackling the regulatory rollbacks that had changed the face of America over twelve years of Republican rule. But despite the positive rhetoric, it quickly became clear that Clinton had no intention of changing the privatization and deregulation agenda that had swept the country. And no place was this clearer than at the U.S. Department of Agriculture (USDA).

In January 1993 Clinton appointed the first African American secretary of agriculture to head an agency notorious for racial discrimination. Advocates wished they could celebrate the momentous event, but Mike Espy was no progressive. As a fellow member of the conservative Democratic Leadership Council, Espy was well acquainted with Clinton, and he was one of the first congressmen to endorse him. But Espy's track record was not comforting. He had appeared in ads for the National Rifle Association, spoken in favor of the death penalty, supported Reagan's policies on funding the Nicaraguan Contras, voted for Republican-sponsored budget cuts, and voted against environmental regulations.

Late in January 1993, just as Clinton was entering the White House, America's biggest food safety scandal ever was making big headlines. Jack in the Box, the fifth-largest hamburger chain in the country at the time, had served contaminated meat, sickening six hundred people and killing three toddlers. *E. coli* 0157:H7 was the culprit.

From the food industry's point of view, Espy was an ideal candidate for

the job of deregulating food-safety regulations under the guise of reform. The meat industry had long wanted to get USDA inspectors out of the way, because if they saw contamination, they could stop the line and thereby cut industry profits. If global food trade was to proceed, a new system was necessary to reduce government inspections. The United States had the most vigilant system of inspecting meat in the world, and it was slowing down "progress." While deregulation had long been in the works, the hamburger that poisoned consumers in the Pacific Northwest was both a public relations challenge and an opening for changing the inspection system.

The meat-and-food-processing industry was among the biggest proponents of "free trade," and it needed to "harmonize" food standards with other countries to prepare for the globalization it was lobbying for through trade agreements. The vertically integrated meat companies saw both the potential for new markets in the developing world and locations for factory farms where environmental regulations were scant. Clinton and Espy, both fans of deregulation and liberalizing trade, were easily persuaded that the harmonization the meat industry wanted was necessary. The stage was set to make big changes, and together Clinton and Espy represented a dangerous combination.

Of course, it is improbable that either man really meant to create a system that would lead to food poisoning for thousands of Americans. It was a case of blind faith in technology and a belief that industry would put public health above private profit. However, neither man knew much about food safety. In fact, Espy had not set out to head USDA—he had hoped to be secretary of health and human services. And while he didn't know much about food safety issues, he knew a lot about deal making.

Clinton, as governor of Arkansas, the state where Tyson Foods is headquartered, had firsthand experience with the political power of big poultry. CEO Don Tyson had supported him in his first run for governor in 1978. However, when Clinton tried to make some progressive reforms as governor, including raising fees on big truck rigs, Tyson wasn't happy, and Clinton lost his support for the 1980 reelection campaign. But Clinton was a quick study. He learned his lesson about trying to bring moderate reform to Arkansas, and especially with anything affecting poultry. Billionaire Don Tyson helped reelect him in 1982, and supported him during his next ten years as governor and in his presidential campaigns.

Hillary Clinton had her Tyson ties as well. James B. Blair, a family friend and an attorney for Tyson Foods, placed many of the cattle futures trades that

netted Hillary both hundreds of thousands of dollars in profit and a scandal when she became first lady.

It would be naive to think that Bill Clinton—the advocate for globalization—had not been lobbied by the poultry industry about replacing USDA meat inspectors with another system that relied on industry self-inspection. Clinton came into office with a free trade agenda, and under his watch, besides the passage of landmark trade legislation, a new food safety system was to become the law of the land. That new system, with an obscure and hard to remember acronym, is called the Hazard Analysis & Critical Control Points system (HACCP).

Yet the story of how the meat-inspection system was weakened did not begin with Clinton or Espy. It began in 1959, when NASA contracted with Pillsbury to feed U.S. astronauts in a way that would not endanger their health through food poisoning. Howard Bauman, chief food scientist at Pillsbury, teamed up with the army's Natick Laboratory to create a program that eventually morphed into the deregulated meat inspection program now known as HACCP.

Bauman and his colleagues originally designed a commonsense approach to eliminating food safety problems methodically and developed a system that, if used properly, would identify the critical processing points at which food safety problems could be monitored, verified through microbial testing, and remedied. "Treatments," such as irradiation or chlorine, would be used to eliminate the bacteria.

Irradiation had emerged as a solution to bacterial contamination because the army's Natick Labs were simultaneously being funded to promote the technique—blasting food with radioactive elements like cobalt-60 and cesium—as an easy way to preserve food for soldiers. It was at the behest of the army that, in 1963, the Food and Drug Administration (FDA) approved the irradiated bacon that became a staple of the military diet. But it was revealed that lab animals fed irradiated food suffered numerous health problems including premature death, a rare form of cancer, tumors, reproductive problems, and insufficient weight gain. In 1968 the FDA rescinded the army's permission to serve irradiated bacon to military personnel.

Yet by the mid-1980s the technology had become largely accepted, after almost thirty years of funding and promotion by the federal government. Today, new technologies that do not use radioactive isotopes are also promoted for irradiating large volumes of food, and the globalized fruit and vegetable industry has jumped on the irradiation bandwagon because the technique

increases shelf life. The USDA's Animal and Plant Health Inspection Agency promotes irradiating imported produce to keep invasive insects, like fruitflies, from reproducing.

It is doubtful that even Pillsbury's Bauman, a proud technocrat, could have foreseen the future applications of irradiation or the quality control system that he developed. He surely believed that the system, not yet named HACCP, would be used to improve food handling, and that astronauts would be safe from food poisoning as they ate irradiated strawberry and peanut cubes, non-crumb cake, and rehydrated spaghetti.

In the spring of 1971, Bauman's expertise in solving food safety problems was called upon by his boss to help solve a crisis. Pillsbury's farina cereal for babies had been found to contain shards of glass, creating a public relations nightmare. In response to the ensuing scandal and recall, Pillsbury announced a new food safety system based on Bauman's work at Natick. Soon afterward, a scourge of botulism poisoning from low-acid canned food began plaguing the canning industry.

The FDA needed to take action. The well-publicized food safety program initiated by Bauman at Pillsbury attracted its attention, because the agency was looking for ways to deal with large food-manufacturing facilities—something Congress had not envisioned when giving the agency its mandate.

Bauman was asked by the FDA to hold a training course for the canning industry in 1973, which was called "Food Safety through the Hazard Analysis and Critical Control Point System," the first use of the HACCP terminology. That same year, the FDA, which regulates all foods except meat, poultry, and processed eggs, wrote regulations requiring that the canning industry use a HACCP-type approach for low-acid foods.

While the botulism poisonings of the early 1970s were tragic, the incidents were easy to document and the solution was easy: low-acid vegetables must be pressure-canned to kill the disease-causing bacteria. But the health crisis that unfolded twenty years later, in the winter of 1993, created out of Jack in the Box's poisoned hamburger crisis, was a whole new kind of problem. It struck at the heart of American culture, putting a food most people thought of as an American icon in a whole new light.

A scary new type of bacterium had emerged called *Escherichia coli* or *E. coli* 0157:H7. The bacterium was first documented in 1982 creating a toxin that causes 5 percent to 10 percent of those exposed to it to become seriously ill with kidney failure—most often affecting the young and old—and in some cases to die. Cattle feces is the most common source of the bacteria.

While we do not know the origin of this strain of E. coli, we do know that

the industrialized food system is responsible for its proliferation. Cattle spend their last three to four months crowded together in megasize feedlots, where they wallow in their own waste. Because they arrive at the slaughter facility covered in fecal matter, from the first step of killing the animal, throughout processing, fecal bacteria are dispersed in the meat product. CAFOs & E coli

Also, the digestive tracks of bovines are suited for foraging on pasture, and for eating hay in the months that grasses do not grow. But, in contrast to their natural diet, while at the feedlot beef cows are fattened on a calorie-high diet of corn, soy, cotton meal, ethanol waste, and other ingredients that create fat-marbled meat. Compromising the meat supply even further are extremely fast slaughter lines. Large slaughterhouses can kill and butcher four hundred cows an hour, using extremely high-speed slaughtering methods, and as a matter of course some fecal material remains on the carcasses. Hamburger is especially vulnerable to contamination, because it is ground in enormous batches that contain parts from thousands of cows that originated in feedlots in multiple countries.

No wonder that the emergence of this deadly new pathogen sent the Clinton administration into a tailspin. While the Jack in the Box scandal was about beef, it didn't take too much analysis to realize that any changes to meat inspection rules would also affect poultry. But Clinton was walking a tightrope between the meat industry and public opinion. Overnight, people had become afraid of meat.

Three days into his new office, Mike Espy was hit by the crisis. He reported directly to Clinton on the outbreak. On February 6, 1993, he said that the USDA's Food Safety and Inspection Service (FSIS) "will prepare a 'revolutionary' strategy to create a meat inspection program more capable of combatting threats from a host of harmful bacteria." Among his prescriptions: "accelerate federal approval of irradiation for use on beef."[1]

Espy went on to announce that the USDA had asked the FDA to legalize irradiation of beef, veal, pork, and lamb. Poultry already had been approved for irradiation in 1990. As part of the American Meat Institute's push for irradiation, the industry's trade association had submitted a petition to the FDA asking that the agency legalize the technique's use for meat. Irradiation was the silver bullet they had been looking for since it would help erase the sins of dirty meat and fast slaughter lines. Irradiation was viewed by many in the industry as the ticket to reducing their liability under the self-regulatory regime of HACCP.

It is clear that the Clinton administration had HACCP in mind from the beginning. In the spring of 1994, Mike Espy interviewed Mike Taylor—master

of the government-industry revolving door. Taylor had been deputy commissioner for policy at the FDA since 1991; he had written not only the deceptive-labeling guidelines that prohibit dairies from labeling milk rBGH-free, but also the HACCP guidelines for seafood. Seafood safety had become a major issue in the previous two decades, since the Centers for Disease Control (CDC) was reporting that almost 3 percent of food-borne illnesses were from seafood. HACCP was promoted to the seafood industry as a way to put the industry in charge of maintaining safety through improving its procedures for processing.

The seafood regulations mandated under the Clinton administration in 1997 were based on the HACCP guidelines that were first developed by Taylor in 1991. HACCP had been described by an official from the FDA Office of Seafood as "something that the industry would do, while FDA would examine how well these establishments were doing it."[2]

And Taylor—with his long history of bouncing between the industry lobby shop King and Spalding, agribusiness giant Monsanto, and the FDA—was a perfect choice to finesse morphing USDA's inspection into a self-regulating HACCP system. He was an experienced lobbyist who could talk smoothly to the industry and the consumer advocacy community with comforting words. As Espy began suffering a free fall from a corruption scandal, Taylor stepped in to do cleanup. During the next two years as administrator of USDA's FSIS and acting undersecretary for food safety, he became HACCP's biggest cheerleader.

However, Taylor had to convince consumer organizations that HACCP was the right program. He also had to create an environment for convincing the media (and through them the public) that the new system would prevent more Jack in the Box–like incidents. He handled this task skillfully by talking about the creation of a science-based food safety system, and in the fall of 1994 he told the American Meat Institute that *E. coli* 0157:H7 would be regulated as an adulterant in ground beef. This single act, along with the access Taylor granted consumer groups to high-level agency meetings, convinced many inside the Beltway that HACCP was the answer to food safety.

While Taylor strategized on how to pacify all sides of the debate, Espy was dealing with the corruption allegations. He had made some dangerous enemies in the beef industry, including a large feedlot operation that filed a lawsuit against USDA for unfair practices that were seen as favoring the poultry industry at the expense of beef. After it was revealed that Espy had solicited and received gifts from Tyson Foods and other companies that USDA regulated, he announced his resignation in fall 1994. An investigation culminated

in a thirty-nine-count indictment against Espy for accepting $36,000 in gifts, for which a jury later acquitted him.[3]

Dan Glickman, a ten-term congressman from Wichita, replaced Espy as secretary of agriculture early in 1995. He was considered a shoo-in: he had spent eighteen years serving on the House Agriculture Committee, and he knew how to work an old boys' network. But Glickman's confirmation became heated, as investigators spent three months reviewing his parking tickets, credit card expenses, and bounced checks at the disgraced House Bank.

As Glickman began to take stock of his new job, HACCP promoter Taylor was already working behind the scenes to undo more than a century of meat inspection regulation. Taylor was either naive or cynical—he was about to trade inspection for treatments. The meat industry wanted inspectors out of the slaughterhouses. USDA inspectors had the power to stop slaughter lines when they saw contamination, and that cost money.

Meat production had changed dramatically because of technological advances allowing animals to be killed and processed at lightning speed. Just as electricity, expanded railways, and refrigeration revolutionized meat production in the mid-1800s, new technologies were dramatically changing the industry in the late twentieth century. The meat industry disparaged USDA inspectors for using an outdated "poke and sniff" method of inspection when they examined each and every animal carcass, slowing down the line. One small problem for the meatpackers was that federal law requires each animal carcass to be inspected by a USDA employee. But the industry was lobbying for a new system that put industry regulators in charge of safety. History was repeating itself.

The first meat inspection law that was passed, at the urging of meatpackers in 1884, was designed to counteract the bad press about filthy and diseased meat exported from the United States to Europe. Much like today, a handful of companies, called the Chicago Beef Trust, dominated the industry. Not only were they selling filthy and adulterated meat, but the trust used monopoly practices to keep farmers from selling cattle at a competitive price. Then, out of the blue, Upton Sinclair's novel *The Jungle* sent shock waves reverberating from coast to coast, as the muckraking press of the day wrote about the disgusting conditions in which meat was produced. Theodore Roosevelt sent investigators to Chicago. Once Sinclair's descriptions were confirmed, Roosevelt supported legislation for federal inspection. The Meat Inspection Act of 1906 mandated inspection of each animal carcass and is the basis of regulation and safety standards for red meats and pork today.

In 1957, as a result of explosive growth in the poultry industry, Congress passed the Poultry Products Inspection Act. In 1968, the Wholesome Poultry Products Act amended and strengthened the earlier law, mandating that poultry be inspected continuously, from slaughter through processing.

In contrast, the FDA's regulatory functions were established with the passage of the Pure Food and Drugs Act in 1906, which passed at the same time as the law mandating meat inspection. Originally part of USDA, the FDA in 1940 became part of the agency that is the Department of Health and Human Services today. While the USDA regulates meat and poultry, the FDA is responsible for shell eggs and all other foods except meat and poultry. However, the FDA has always been poorly staffed and had many fewer inspectors—approximately twelve hundred today, compared to the USDA's six thousand line inspectors and twelve hundred veterinarian inspectors.

From the 1970s onward, the meat industry's resistance to USDA inspection increased as technology made large, industrialized slaughterhouses possible. Lobbying during the Ford administration resulted in the commissioning of a study by the D.C.-based consulting firm Booz Allen Hamilton to make recommendations for changing the meat inspection system. The study was released during the Carter administration, and its focus was on improving cost-effectiveness and eliminating unnecessary interference with commerce. The study recommended cutting back on the role of government meat inspectors and encouraging "corporate quality control."[4] It also proposed creating a monitoring system that "places the burden of proof of compliance with Federal laws and regulations on the industry. It is their responsibility to provide acceptable evidence of this compliance."[5]

Stan Painter knows firsthand how the meat industry pressured elected officials and the agency to deregulate USDA meat inspection. Painter, born and raised in Alabama, speaks with a pleasing Southern inflection that belies his passion for protecting Americans from the ravages of food poisoning. As chairman of the National Joint Council of Food Inspection Locals (NJC), an affiliate of the American Federation of Government Employees (AFGE, the union that represents USDA meat inspectors), he has been fighting to protect the integrity of the inspection system for decades.

Painter has spent his career in slaughterhouses—mostly poultry. He began as a line worker and on the sanitation cleanup crew in a poultry processing plant that supplied meat to fast-food giant Kentucky Fried Chicken. After being promoted to quality control officer and eventually to supervisor of the plant, in the mid-1980s Painter was encouraged by a USDA veterinarian to

apply for a position as an inspector with USDA's Food Safety and Inspection Service. He has worked for the agency since 1985.

Painter says that the pressure to deregulate meat inspection began early in his career as a USDA inspector. In 1985, during the Reagan era, the Gramm-Rudman-Hollings Act passed, mandating across-the-board budget cuts. FSIS personnel began to feel the pain of reduced funding in 1986, because 90 percent of the agency's budget was in salaries. According to Painter, the first thing the Reagan appointees to FSIS ordered in response to the cuts was to do away with inspectors at the beginning of the slaughter line. Those inspectors checked poultry for things that are gross and disgusting but that do not typically kill poultry or people.

Consumers would no doubt be shocked to know that, as a result, today they are eating chicken with external blemishes, tumors, cancers, and gaping wounds oozing pus. Since 1986, there is no USDA inspector present to check if a bird arrived at the slaughter line with a disease or was already dead from injury or disease on arrival.

Meanwhile, during Reagan's tenure, as pressure mounted around seafood safety, Congress gave the Department of Commerce and the National Marine Fisheries Service (NMFS) the task of developing a new model of safety inspection for seafood. They recommended that HACCP be used as a voluntary inspection program. In 1988, as the deregulation frenzy continued, the FDA, FSIS, NMFS, and the U.S. Army's Office of the Surgeon General joined together to create and fund the National Advisory Committee on Microbiological Criteria for Foods (NACMCF), which endorsed HACCP in 1989.[6] Serving on the NACMCF committee was Howard Bauman, originator of the HACCP concept.

During 1990, under President George H.W. Bush's administration, FSIS held consultations with industry, the USDA inspectors, and the public regarding HACCP. Five formal meetings, called "workshops," were held in 1991 and 1992 to develop the deregulated inspection program. The meat industry was given a prominent role in developing the proposed regulatory changes that were debated. The USDA meat inspectors and consumer groups were solemnly promised that HACCP would not replace inspection but would augment and modernize it, through further safety procedures and the addition of microbial testing.

Painter explains that they were told their role as inspectors wouldn't change with the adoption of the new program. But, he says, "the ink wasn't dry on the paper before the agency started making it a replacement."

By the time Clinton came into office, deregulation was well under way, and it had his blessing. In May 1993, Espy directed FSIS to initiate a rulemaking to establish HACCP in all meat and poultry plants. By the time of Glickman's arrival, the timetable for rewriting the regulations had been established.

During the summer of 1996, during barbecuing season, Glickman gleefully released a statement to the press: "President Bill Clinton announced a new food safety rule that will revolutionize meat and poultry inspections. . . . It is a complicated name for a simple idea. . . . HACCP puts safety first by putting prevention first."[7]

In October 1996, Glickman appointed Tom Billy to be the administrator of FSIS; he had been associate administrator since 1994. Before that time, he was at the FDA directing the Office of Seafood—where he worked with who else but Michael Taylor in implementing HACCP for seafood. By 1996, having performed his magic, Taylor was leaving USDA to go back to the lobby-shop law firm King & Spalding, where he had represented Monsanto before joining the FDA for the second time. He said in an agency press release that the implementation of HACCP "could not be in better hands."[8] Painter calls Taylor and Billy "partners in crime." They had worked together at the FDA on HACCP, and they were committed to deregulation. In his new role, Billy moved ahead to implement HACCP in meat processing.

USDA considers slaughtering and processing two different and separate operations. The 1996 regulations mandated HACCP for meat processing and recommended it for slaughter plants. Processing is the step after a bird is killed and gutted, which involves butchering, preparing, and packaging different cuts of meat, and it is carried out either in a different facility or in another part of a very large plant. Tom Billy was committed to seeing HACCP in all phases of meat production to line up with the trade rules the Clinton administration was pushing.

Billy served an important role in globalizing food trade through his positions at Codex Alimentarius, the agency that creates the internationally adopted food standards used by the World Trade Organization. Concurrent with his position at FSIS, Billy in the mid-1990s served as vice chairman of Codex, during the time that the standards for irradiation and HACCP were adopted. In 1999, he became chairman of Codex for four years, eventually leaving FSIS to work full time at Codex.

In 1997, as part of the international trade agenda, Codex released the "International Code of Practice: General Principles of Food Hygiene." As a result of the World Trade Organization phytosanitary agreement, which limits protective measures by individual member countries, HACCP became

the safety system of the world's globalized food system. It replaced protective regulations with weaker ones that were based on the lowest common denominator. For instance, the rules were designed to allow a chicken processed in China or Mexico to be sold in the United States or in any other country in the world. The purpose of instituting HACCP became immediately clear: it put the industry in the driver's seat on food safety and meant that giant food companies could move processing to the developed world.

In the United States, the USDA inspectors very quickly renamed the acronym HACCP "have a cup of coffee and pray." Just as the meatpackers had hoped, it created a company "honor system" in which inspectors monitored plant records rather than inspected meat. If HACCP had indeed been adopted in addition to inspection and had required companies to identify critical points where contamination could occur, it would have been a positive move. If it had required the industry to develop sanitation plans that remedied the situation and allowed inspectors to use real-time microbial testing, the new system would have improved meat safety. But this was never the intention.

HACCP reduced the role of USDA inspectors and created a new paperwork function. Inspectors in processing were told not to stop the line for contamination, but to wait until the meat product reached the end of the line, where a "treatment" would take care of the problem. Treatments such as ammonia, chlorine, and trisodium phosphate were encouraged during processing, and irradiation was promoted as an "end-of-line treatment." And there was no way that inspectors could chase contaminated meat to the end of the line to see if it had been treated successfully.

Painter explains that in 1970 line speeds for poultry slaughter were forty-six birds a minute, while today they have advanced to 140 birds per minute and can be as high as 210 birds per minute in some large plants. Rather than act when witnessing a potentially hazardous situation, which slows down the line, inspectors are told "to let the system work," meaning maybe a later step will catch the contamination.

Not only does this create food safety issues as birds whiz by, it also creates a very dangerous work environment. Painter recounts several macabre safety incidents: a woman whose thumb was caught in the equipment and pulled off; a worker cut in half while cleaning the "chicken chiller"; several people killed from exposure to the carbon dioxide "treatment"; and a man ground alive when he fell into a grinding machine.

In June 1999, the Government Accountability Project (GAP), the nonprofit whistle-blower organization, designed a survey for federal meat and poultry inspectors who worked in HACCP plants. The survey results were

incorporated into a report written in 2000 by GAP and Public Citizen called "The Jungle: Is America's Meat Fit to Eat," of which I was one of the authors.

The survey offered proof that HACCP had indeed become a system that took the inspectors away from the front lines of inspection. The inspectors documented that they could no longer take direct action against contamination, including preventing feces, vomit, and metal shards from entering the food system. Inspectors reported that they have been instructed not to document violations they have observed of company employees performing slaughter duties.

Among the quotes from the inspectors:

"Instead of taking action immediately, we are instructed to 'let the system work.' "

"It's a big paper chase . . . dot the 'i,' cross the 't.' That is all that counts."

"Plant managers say the rule is—there are no rules! We [plant managers] write our own regulations."

"Two sets of records are being kept by [the meat plant]; one set to show USDA inspectors (looks real good); and one set for their own use."

"Many things go on—especially things on the floor; they just pick it [contaminated meat] up and put it in for human consumption."

While HACCP had been mandated only for processing, Painter says that USDA had always planned to introduce it into slaughter. By 1998, they had established a pilot program for slaughter called HACCP-based Inspection Models Project (HIMP). Its goal was to take inspectors off the line in slaughter facilities and have them review company records of inspection done by company employees. AFGE national president Bobby Harnage said, "This is a back-door attempt to change administratively what Congress would never consider changing legislatively—significantly weakening the entire meat and poultry inspection process. We're not going to sit back and let the USDA abdicate its responsibility to American consumers."[9] The AFGE filed suit against the USDA for breaking the law that stated that an inspector must examine each animal carcass.

Despite the lawsuit, in 1999, thirty plants began participating in the program to reduce the number of inspectors in slaughter plants. In 2000, the District of Columbia Circuit Court of Appeals ruled against the USDA, saying that HIMP violated federal law. The judges wrote in their decision: "The government believes that federal employees fulfill their statutory duty to inspect by watching others perform the task. One might as well say that umpires are

pitchers because they carefully watch other throw baseballs."[10] In response, the agency redesigned the HIMP project to position an FSIS carcass inspector at the end of each slaughter line. The union appealed this action, but in 2001 the court found that the redesigned program met the statutory requirements.

Felicia Nestor has worked directly with USDA meat inspector whistleblowers for the past fifteen years. It was never a career she set out to have. Nestor put herself through City University in New York as an art and music major by waitressing, and eventually worked as a photographer. She says that while taking professional photographs at the United Nations, she heard incredible people speaking about civil rights—an experience that inspired her to go to law school. While in Washington, D.C., finishing her degree at Georgetown Law School, she met someone from GAP, where she began as a volunteer photographer before joining the staff.

Nestor says she had no background in food safety, but when she first started working for GAP in the mid-1990s she had a completely open mind about the situation. She could see that the inspectors were raising red flags about many issues but that they had no support from consumer groups who went right along with the USDA administration.

Now, in retrospect, Nestor can see that everything the inspectors were concerned about has come to pass, and that the consumer groups that signed off on HACCP were completely wrong. She says in large part it was prejudice against blue-collar workers that caused these groups to be persuaded by smooth-talking officials that HACCP would be better than having inspectors on the front lines.

Nestor states that nothing illustrates how the "consumer groups were snowed than when they signed on to HIMP." GAP and Public Citizen were the only groups to speak out against privatized inspection during slaughter—the period during which most contamination occurs. FSIS administrator Tom Billy engaged in a propaganda campaign focused on convincing advocacy groups like the Consumer Federation of America that the new system was based on new scientific methods, and that the inspectors were just afraid of losing their jobs.

Nestor laments the refusal to listen to the USDA inspectors: "Over the years, I've spoken personally with hundreds of concerned inspectors. None of them have been in danger of losing their jobs because of an agency program, but they do worry about the food that their parents, their children or grandchildren, and their neighbors eat. USDA depends on the uninformed, knee-jerk, antiunion, or anti–blue collar prejudice to push these deregulatory programs through."

She explains that USDA managers have never worked inside a meat or poultry plant and have had no experience with industry attempts to cut corners without being caught. The only experience they have inside the plants is an occasional dog-and-pony show that a company will put on, before which plant employees scour the plant from top to bottom, and during which managers run the production lines at about half the normal speed.

Nestor recounts her experience with a Gold Kist poultry plant that began operating under the HIMP pilot program. Everything blew up when she was able to convince the *Austin Statesmen*, and eventually Cox Newspapers, to cover the scandal, because the company had the contract for providing chicken nuggets to the school lunch program. Inspectors reported that birds were being slaughtered with a line speed of two hundred birds per minute, and that diseased birds with tumors, oozing wounds, and other health problems were being processed for schools around the country. When the inspectors informed the USDA chain of command of the problem, they were admonished, and nothing was done.

Under HIMP, contamination is removed through the use of disinfectants such as ammonia, chlorine, and trisodium phosphate. As Stan Painter says, the inspectors in those plants are "window dressing." Today, there are approximately thirty HIMP plants processing chicken, swine, and turkey.

Nestor also has written extensively on the problems with the microbial testing that the USDA promoted in order to gain support for the new system. She says the agency has consistently misled the public about its pathogen-sampling programs. She uncovered the fact that the USDA was not testing product daily for salmonella, as consumers had been misled to believe during the campaign to get public buy-in for the new program. Instead, most plants receive fewer than sixty tests per year. Nestor says, "The agency has been heavy on rhetoric about its 'science-based' programs, yet light on effective scientific methods, and obtuse, even deceptive about its practices."

GAP and Public Citizen's exhaustive, five-month review of USDA's own records, obtained under the Freedom of Information Act and published as *Hamburger Hell*, concluded that there was no factual evidence, based on the testing program, for USDA's reassurances that the food supply has become safer for consumers of ground beef. Using the agency's own test results, Nestor and co-author Patty Lovera found that the agency was taking less than 1 percent of all of its ground beef samples from the large plants that produced 85 percent of the raw ground beef supplies. It was taking 60 percent of the samples at the smallest plants, which produced less than 1 percent of all ground beef.

USDA gave the large plants a pass and blamed the smallest processors for contamination problems. As a result, in just the first few years of the new policy, USDA forced over 40 percent of the smallest grinders out of the market. To this day both the FDA and the USDA discriminate against small food processors. For instance, the FDA wastes resources patrolling for sales of raw milk (or cheese produced from the milk) that consumers buy directly from the producer, instead of using resources to deal with the major food safety issues that exist at large, industrial food-processing plants.

The USDA has never made it possible for agency inspectors to use the many new tools that are available for microbial sampling. Nestor, who continues to work with whistle-blowers, says that inspectors could easily detect sources of contamination prior to the food entering the market, but "their bosses just won't authorize them to do so."

Under George W. Bush's administration, Elsa Murano became undersecretary for food safety and deregulation took a new form: risk-based inspection (RBI). This program also was geared toward removing inspectors from the front lines of inspection, based on flawed microbial testing. Murano had run the Center for Food Safety at Texas A&M University and had begun her career working in the food irradiation center at Iowa State, along with her husband, Dr. Peter Murano. Elsa Murano, with cultlike trust in the technology, attempted to change the already weak irradiation label to read "cold pasteurization" to remove irradiation on the label.

During her tenure as undersecretary, Murano's husband was appointed deputy administrator for special nutrition programs at the USDA's Food and Nutrition Service. In that capacity, he was responsible for the National School Lunch Program, where he promoted the use of irradiation for the meat used in the program. Public Citizen launched a successful nationwide campaign that resulted in no school district ever purchasing irradiated meat, and in maintaining the word "irradiation" on the labels of irradiated food.

Irradiation was viewed by the Bush administration's USDA as the silver bullet for preventing food poisoning under the RBI system. In Bush's second term, the undersecretary for food safety, Richard Raymond, a medical doctor who had formerly been Nebraska's chief medical officer, began a series of daylong meetings with stakeholders to promote the newest deregulation scheme. In 2006, he called RBI the "natural evolution" of FSIS procedures. In essence, the proposed program would have removed meat inspectors from plants with good testing scores and focused inspections on plants with poor records. The program would be based on ranking meat products by inherent risk and using chemical washes and irradiation to destroy bacteria.

It was an outrageous proposal, because not only were the salmonella and *E. coli* testing records they planned to use flawed, but the testing had been done in small plants, many of which had since been shut down, rather than the large ones that produced most of the meat consumed by Americans. A September 2006 USDA inspector general report identified as many as 865 establishments nationwide that had no testing data for salmonella.

There is no doubt that part of the USDA's enthusiasm for RBI was resource-related. The agency told the media that it was considering allowing "virtual inspection" of plants—companies would e-mail records so that agency personnel could examine them without ever coming to the plant.

Fortunately, Congresswoman Rosa DeLauro, chairwoman of the House Agriculture FDA appropriations subcommittee, brought the scheme to a screeching halt. She was able to add an amendment to an Iraqi war supplemental budget bill that FSIS could not spend even another dollar of taxpayer money until the Office of the Inspector General audited the agency's inspection system, including the microbial testing. In 2010 the OIG spent six months auditing the program and issued part one of the report in March 2011. The report was very critical of the agency's plan and concluded that FSIS must thoroughly reevaluate its testing. A second phase of the investigation is in progress.

But perhaps nothing demonstrates the Bush administration's failure to put public health first more than mad cow disease, the common name for bovine spongiform encephalopathy (BSE). First identified in the UK in 1986, when ranchers noticed their cows getting sick and being unable to walk, the USDA has never fully dealt with the safety issues related to this frightening disease. Now present in Europe, Asia, and North America, BSE has killed more than one hundred people, forced farmers to preemptively kill millions of cattle, and devastated the beef industry in some countries. Scientists believe the disease is spread when cattle eat nervous system tissues, such as the brain and spinal cord, from other infected animals.

In 2008 President Barack Obama came into office facing a food safety scandal that was a result of Bush-era policies. School lunches had fed children meat from sick and abused cows that were at a higher risk of having mad cow disease. A meat plant in Chino, California, the second largest supplier of beef to the National School Lunch Program, was found to be serving meat from tortured "downer" cows, which are so sick or crippled that they cannot get up. Making the scandal even more sensational, under the Bush administration the company had been named the USDA "supplier of the year" for 2004–5 and had delivered beef to schools in thirty-six states.[11]

A Humane Society of the United States undercover investigator filmed workers at the midsize plant shoving cows violently with forklifts, using electric prods in sensitive areas, and employing other repulsive methods to make the diseased and sick dairy cows that are used for cheap meat walk through inspection. Wayne Pacelle, president of the organization, said that their investigator "found cows—in all stages of the handling and pre-slaughter process—being tormented to get them to stand and then walk toward the kill box."[12]

Foreshadowing the future lack of timely action, it took the new president a year to respond. Obama eventually banned the use of downer cows for meat, closing the loophole that the Chino plant was exploiting. While a step in the right direction, the move did not stop other practices that can spread mad cow disease, such as allowing cows to eat waste from the floors of poultry houses, cattle blood, and processed leftovers from restaurants. The administration is also not doing adequate testing for BSE in the United States and is allowing cattle in from countries such as Canada that have had reoccurring cases of the disease.

The failure to act quickly and decisively on important issues is an ongoing characteristic of the administration. Obama also waited until January 25, 2010, a full year into his presidency, to announce the nomination of Elisabeth Hagan, who had been chief medical officer at the USDA, as the permanent undersecretary of FSIS—a length of time much criticized by his opponents. Congress finally made her appointment permanent in September 2010. Hagan had been trained at Harvard and taught and practiced medicine before joining the senior staff of FSIS in 2006. Although the agency under Hagan has been somewhat more receptive to concerns of the advocacy community, Tony Corbo, lobbyist for Food & Water Watch's food program, which has been fighting for more stringent meat inspection regulation, assesses FSIS as follows: "The Obama administration has made some long overdue updates to the rules for meat inspection, like expanding the list of pathogens that are considered adulterants in ground beef. But they have not stood up to the meat industry strongly enough to slow the momentum toward deregulation that has prevailed for decades."

In the meantime, the FDA was in deep trouble dealing with a series of massive food recalls. And Michael Taylor would be coming back for another turn of the revolving door.

7

ANIMALS ON DRUGS

Corruption is like a ball of snow, once it's set a rolling it must increase.
—Charles Caleb Colton (1780–1832), British writer

It was déjà vu. Michael Taylor, the ever-ready maestro of the revolving door, was back at the FDA—this time appointed by President Barack Obama to be deputy commissioner of foods. The *New York Times* politely observed that Taylor "migrated among government, industry and academia." A former strategist for Monsanto, Taylor started in July 2009 as a senior adviser to Obama's new FDA commissioner, Margaret Hamburg, and in January 2010 he was appointed deputy commissioner of food.[1] This newly created position gave Taylor authority over all food-related work at the FDA, including oversight of the Center for Food Safety and Applied Nutrition. The FDA had faced one food scandal after another—massive recalls had become the new normal.

The FDA was established with the passage of the 1906 Pure Food and Drugs Act, a mandate that has grown exponentially as the food system has become more consolidated and globalized. The advent of processed food, produced in huge volumes, and the abundance of produce sourced from just a few locations have made food safety a whole new ball game. The FDA has come to regulate all foods except meat, poultry, and processed eggs.

In 1906, the Pure Food and Drugs Act was focused on preventing unscrupulous companies from selling mislabeled products—for instance, maple syrup that was 90 percent glucose with a coal tar–based maple flavoring or jelly advertised as quince made mostly of glucose and coal tar essence of quince. Like today, these were contentious issues, but unlike now, most food in the early twentieth century was prepared "from scratch" at home, and produce during most of the year came from local or regional sources.

The FDA today is understaffed and underresourced in today's globalized world, where most food is processed. Most food-processing facilities are not inspected, and the FDA has relied on issuing guidances to the food industry, which are not backed up with enforcement. More often than not, the FDA reacts to problems instead of trying to prevent them. Hundreds of recalls have taken place over the past decade, but some are particularly memorable in their scope.

- On September 14, 2006, the FDA told Americans to stop eating bagged spinach because of contamination by a virulent strain of *E. coli* that killed at least five people after a painful, bloody illness sickened more than 205 people in twenty-six states, leaving them vulnerable to future health problems.[2]
- In March 2007, due to adulterated pet food, thousands of pets died from kidney failure. More than 5,300 brands of pet food had been contaminated with Chinese-produced wheat gluten that had been tainted with melamine to give the false appearance of a higher level of protein.
- An enormous national salmonella outbreak in peanut products began in 2008 and sickened more than 630 people in forty-three states, killing nine. The incident was linked to a sole Georgia processing plant owned by the Peanut Corporation of America that had opened in 2005—a facility that had never been inspected until after the outbreak. The illness affected 275 companies, and almost 3,500 products were recalled. One of the companies involved declined to recall its products, highlighting the lack of food safety authority at the FDA. Later, in 2009, a similar salmonella outbreak took place in pistachios.
- During the summer of 2009, a refrigerated-cookie-dough shortage took place after Nestlé's Toll House dough sickened at least sixty-six people in twenty-eight states from *E. coli* 0157:H7. The massive amount of dough was prepared in the company's Danville, Virginia, plant, but the source of the *E. coli* was never found.
- In March 2010 the FDA announced a nationwide recall of black pepper. Over the previous several years, pepper-related recalls had been initiated because of salmonella contamination. The largest incident related to black pepper occurred when 1.24 million pounds of pepper-coated salami was recalled because of salmonella poisoning, which affected 238 people in forty-four states and the District of Columbia.
- A massive recall announced on March 4, 2010, was remarkable for the number of foods it involved and for the FDA's lack of spine in dealing

with the company responsible—a producer of the flavor enhancer hydrolyzed vegetable protein (HVP). According to nutritionist and food writer Dr. Marion Nestle, not only did the company not take immediate action, but the FDA failed as well: "[F]rom January 21 until at least February 20, the company continued to ship HVP potentially contaminated with Salmonella. Then, over the next *six* days, the FDA had to beg Basic Food Flavors to issue a recall. The company may have started notifying customers on February 26 but the FDA did not announce the recall until March 4, weeks after the first findings of Salmonella."[3] (Emphasis in original.)

- The largest egg recall in history took place in 2010. Half a billion eggs, produced in just two facilities, were recalled that August. Two rodent-infested Iowa egg farms caused almost two thousand traceable illnesses from salmonella and sickened nearly sixty thousand people nationwide.

This rash of high-profile, large-volume food recalls brought the issue of reforming the FDA to a head during the 111th Congress, when, after a strange and convoluted path, the FDA Food Safety Modernization Act finally passed in December 2010 and was signed into law by Obama on January 4, 2011. The rancorous debate over the bill began during 2009, with the initial passage of a controversial House version of the bill. The debate moved to the Senate, where after a vicious and prolonged process companion legislation passed on November 30, 2010, and moved on for reconciliation with the House bill.

At this point, the legislation hit a snag, because Senate sponsors had added tax provision, which according to the U.S. Constitution can originate only in the House. The bill was then inserted by the House into a budget bill and sent back to the Senate, by then deep into a tax debate, where one of its harshest critics, Republican senator Tom Coburn from Oklahoma, threatened to filibuster it if it was not removed. At the last moment, leaders of both parties in the Senate, fearing they would be blamed for food-poisoning deaths, agreed to pass a revised version, and the House passed the final version shortly before Christmas 2010. It was a theatrical finish to a bill crafted with drama.

Industries had lined up against consumer organizations and outspoken advocates such as Connecticut congresswoman Rosa Delauro. As chairwoman of the House Agriculture FDA appropriations subcommittee, Delauro had been leading the charge for adequate funding of food safety at the FDA and USDA. Her demands for regular inspections of food facilities, adequate traceability for contaminated food, and standard imported-food regulations were viewed as radical, job-killing government interference.

Senator Coburn, a physician who often takes anti–public health positions, had editorialized in *USA Today* that the bill would "impose new and invasive regulations" and expand "duplicative" bureaucracy. He went on to declare: "For the past 100 years, the free market, not the government, has been the primary driver of innovation and improved safety. Consumer choice is a far more effective accountability mechanism than government bureaucracies."[4]

The David-and-Goliath battle was vicious and marked by an ongoing misinformation campaign by the industries. The food-processing industry—represented by the Grocery Manufacturers Association, which is a well-funded organization with a staff of one hundred—had no desire to change the status quo. It was dead set against mandatory recalls and frequent inspections.

United Fresh, the lobbying organization for the produce giants, argued that scale is unimportant and that large produce growers should have the same regulations as the small farmer who sells directly to consumers at a farmers' market. Other debates raged over registration fees, and again industry demanded that Kraft should pay the same as the small independent cheesemaker.

Considering the gravity of the situation at the FDA, and the contentious battle taking place over the legislation, it is no surprise that Michael Taylor was back. In rotations between government and industry he had become the consummate damage-control expert for Democratic administrations. He was back to help shepherd the bill as it moved through the Senate and to manage the contentious process of writing the rules for implementation after passage. No one is more accomplished at schmoozing industry or mainstream consumer advocates than Taylor. FDA staff say—off the record—that Taylor must be involved in every decision and is a continual bottleneck to making progress on implementing the bill.

While the law certainly doesn't represent an overhaul of the food safety system, it has provided the FDA with mandatory recall authority. The other significant part of the bill is the establishment of a schedule for FDA inspections of food-processing facilities—a measure that is long overdue, since many manufacturing plants have never been inspected, but that is completely inadequate. There are 190,000 registered food facilities in the United States and 230,000 foreign ones. The new law mandates inspection once every three years for "high-risk" facilities and once every five years for "low-risk" ones.

But the devil is in the details. The legislation directs the FDA to double its inspections of foreign food facilities that export products to the United States every year for five years, beginning with six hundred foreign facilities in fiscal year 2011, bringing the number to nineteen thousand in fiscal year

2016. Industry has vehemently opposed inspections, and with this schedule it has been granted its wish. The other problem is the definition of risk. Taylor's staff is still in the process of determining how the risk categories will be defined.

The other big win in the legislation was the Tester amendment, offered by Senator Jon Tester, a rancher from Montana. An exemption from inspections is given to farms or small food businesses grossing less than $500,000 per year that sell a majority of their food products directly to consumers, restaurants, or grocery stores within a 275-mile radius from their place of business or within the same state. The produce industry tried vainly to strip this provision, and it is a testament to grassroots activism that it remained in the bill. United Fresh and nineteen other produce organizations sent a letter denouncing the amendment and calling Tester names.

Unfortunately, the new legislation does not deal with many of the important issues that are challenging public health because of the globalized and industrialized food system. While the FDA spends resources and staff time on busting small cheese producers for using raw milk, we are facing a crisis of antibiotic resistance that is caused first and foremost by the industrialized livestock industry. The FDA has the power to stop factory farms from using low-dose antibiotics to promote growth, yet it has refused to take sufficient action, even though, at some time in the near future, antibiotics may be rendered useless against infection.

In August 2011 the biggest contaminated meat recall to date was ordered by the third-largest turkey-producing corporation, Cargill. In twenty-six states, 36 million pounds of ground turkey contaminated with a strain of salmonella resistant to multiple antibiotics sickened dozens of people. The poisoned meat was produced at a single plant in Arkansas, demonstrating the flaw with a food system that consolidates production and deregulates safety. *Salmonella* Heidelberg, the offending bacteria, is a "superbug" that has mutated to become resistant to antibiotics. For most people, diarrhea, vomiting, and nausea mark salmonella poisoning, but it can cause a serious infection of the blood that can be fatal.

And worse is coming, according to a multinational team of scientists who documented illnesses caused by *Salmonella* Kentucky in Europe, the Middle East, and the United States. This new strain of salmonella is resistant to Cipro, the powerful antibiotic that is usually used to treat the illness. The primary carrier: poultry.[5]

Dr. Robert Lawrence is not surprised that poultry is contaminated with antibiotic-resistant bacteria. The organization of which he is the founding director—the Johns Hopkins Center for a Livable Future (CLF)—has a research staff that has investigated and written extensively on the growing threat of antibiotic resistance and its relationship to industrialized animal production. CLF is an interdisciplinary group of faculty and staff that focuses attention on equity, health, and the Earth's resources.[6]

Lawrence's stamina and energy are more reminiscent of someone in the early years of their career than a person who began his career in the late 1950s. Not only a medical doctor and an expert on antibiotic resistance, he is now an activist academic willing to publicly challenge agribusiness and factory farms. In addition to filling his position at CLF, he is a professor at Johns Hopkins Bloomberg School of Public Health and professor of medicine at the Johns Hopkins School of Medicine. His staff says he wears many hats: one day he might be in Oklahoma testifying as an expert witness against Tyson for polluting a million-acre area along the Illinois River, and the next day he could be in South Africa for a meeting on HIV.

Lawrence is the son of a minister, and he recollects his father telling him that he "could do whatever he wanted as long as it was socially useful." He says that in the narrow confines of his life at that time, "socially useful" meant being a minister or a doctor. He chose doctor, although he thought he might practice as part of a ministry in Africa.

Lawrence has had a long and distinguished career; after graduating from Harvard Medical School, he practiced tropical medicine in Latin America and ran the first multiracial primary care facility in North Carolina. In 1974 he was appointed as the first director of the Division of Primary Care at Harvard Medical School, and then he was recruited to run the Rockefeller Foundation's Public Health Program for Africa, Asia, and Latin America. It was during this time that he became interested in agriculture, because he worked in an atmosphere where "the silos were coming down" in the grant making for health, agriculture, the environment, and population.

By the time Lawrence was recruited by Johns Hopkins he was a convert to sustainable agriculture and convinced that industrialized animal production was a major cause of the health problems plaguing Americans. One of CLF's most important missions is combating antibiotic resistance. According to the Centers for Disease Control and Prevention (CDC), 2 million people in the United States contract resistant infections each year, and ninety thousand of them die. Almost all bacterial infections are now resistant to the specific antibiotic that was initially the most effective treatment for it.

The livestock industry is engaged in a shameful misuse of antibiotics. CLF's Dr. David Love examined FDA data and calculated that 29 million

pounds are used each year. His analysis showed that animal agriculture was responsible annually for almost 80 percent of the antibiotics used.[7]

The threat of antibiotic resistance emerging for the "wonder drugs" of the twentieth century was identified early on. Lawrence cites the 1945 Nobel Prize lecture by Alexander Fleming, who discovered penicillin and warned of antibiotic resistance: "It is not difficult to make microbes resistant to penicillin in the laboratory by exposing them to concentrations not sufficient to kill them."[8] Lawrence goes on to say that the habitual use of low doses of antibiotics in animal feed is the precise formula for developing antibiotic resistance. Low doses of antibiotics are able to eliminate only the most susceptible bacteria in a survival of the fittest contest that promotes the reproduction of antibiotic-resistant strains. Humans come into contact with these strains through their food, the air, the water, and the soil.

Feed companies and factory farms, Lawrence says, have unrestricted access to these drugs, with no government oversight. In 2008 CLF partnered with the Pew Commission on Industrial Farm Animal Production to produce policy recommendations in the report "Putting Meat on the Table: Industrial Farm Animal Production in America." The commission recommended phasing out the use of antimicrobials currently added to feed in food animal production, in order to preserve antibiotics for treatment of infectious diseases in people.

Cases of the bacterial infection known as MRSA (Methicillin-resistant Staphylococcus aureus) are now killing between seventeen thousand and eighteen thousand Americans a year, and this is likely related to the use of low-dose antibiotics in swine and other animal production.[9] MRSA is a type of staph infection that does not respond to the antibiotics commonly used to treat the disease. In the past it was a hospital-acquired infection, but increasingly it is acquired outside of the medical setting. The medical establishment is aware of what is going on, according to Lawrence, but it's just not doing everything necessary to stand up to the drug and livestock industries.

Even the conservative American Medical Association has passed a resolution against the use of nontherapeutic antibiotics. Lawrence wrote to the directors of the National Institute of Allergy and Infectious Diseases at the NIH and of the CDC about his concerns and received written confirmation from both that the misuse of antibiotics in industrial food animal production is directly linked to antibacterial resistance in human pathogens.[10]

Another activist physician, Dr. David Wallinga, the senior adviser in science, food, and health at the Institute for Agriculture and Trade Policy (IATP), says that MRSA can be found in some farm operations and retail meats, as well as in previously well people. Wallinga says that the MRSA bacteria often

lives in the nose and on skin: "People can carry the bacteria unknowingly and without getting sick, but it also can cause serious human infections of the bloodstream, skin, lungs (pneumonia), and other organs. . . . Rising numbers of people are falling ill with a kind of staph untreatable with these drugs."[11] He adds that a 2009 study found MRSA highly prevalent in 49 percent of swine and 45 percent of swine workers for a large-scale commercial confinement company with farms in Iowa and Illinois. Wallinga also notes that a Canadian study found pigs carrying MRSA on almost half of Canadian pig farms tested.[12]

While the European Union and the most respected health agencies in the world, including the World Health Organization, agree that the use of antibiotics as a component of animal feed to promote growth should be banned, the United States has failed to take strong action. It is not just the livestock industry that lobbies to prevent legislation or regulation from hampering its use of low-dose antibiotics, the powerful pharmaceutical industry finds the misuse of antibiotics highly profitable. This combined political influence has stymied legislative and regulatory action on antibiotics.

Wallinga and Lawrence are both advocates of legislation that would phase out the nontherapeutic use of medically important antibiotics in livestock. The Preservation of Antibiotics for Medical Treatment Act (PAMTA), most recently introduced by Congresswoman Louise Slaughter (D-NY), has been introduced in thirteen different iterations over seven sessions of Congress—every Congress from the 106th to the 112th. It was named the Preservation of Essential Antibiotics for Human Diseases Act of 1999 in the 106th and subsequently referred to as the Preservation of Antibiotics for Medical Treatment Act. The bill has had only one hearing during this entire period of time.

The regulatory authorities—especially the USDA—also have been unwilling to take sufficient action to protect the effectiveness of antibiotics. President Obama's secretary of agriculture, Tom Vilsack, told the National Cattlemen's Beef Association, "USDA's public position is, and always has been, that antibiotics need to be used judiciously, and we believe they already are."

In a September 7, 2011, Government Accountability Office (GAO) report, "Antibiotic Resistance: Agencies Have Made Limited Progress Addressing Antibiotic Use in Animals," the USDA is quoted as saying, "Currently, there is insufficient scientific information available to make important policy decisions regarding use of antibiotics for growth promotion purposes."[13] Twenty-four public interest organizations wrote in response to Secretary Vilsack about their "grave concerns" concerning the agency's position, stating that "USDA has been inconsistent at best in recognizing and accepting

the significant scientific evidence supporting the existence of an overuse of antibiotics in animal agriculture."[14]

The group's response went on to note several instances that showed the USDA's refusal to take the life-threatening loss of antibiotics seriously, including the removal from the USDA's Web site of a July 2011 technical report summarizing the robust literature on antibiotic resistance. At the May 2011 Future of Food conference at Georgetown University, Vilsack responded to a questioner about what action the agency would take on antibiotic resistance, stating: "I'm not quite sure. How do you basically legislate that?" He added, "It's not as easy as it appears."[15]

The real power to limit use of antibiotics, however, resides with the FDA—the agency that approves the use of the drugs. Among the recent issues the 2011 GAO report addressed was what actions the FDA has taken to mitigate the risk of antibiotic resistance. The report criticized the FDA for the "lack of crucial details necessary to examine trends and understand the relationship between use and resistance." It chastised the FDA for collecting data from drug companies on antibiotics sold for use in food animals without showing which antibiotics are used or for what purpose. The report summarizes the problem:

> FDA . . . faces challenges mitigating risk from antibiotics approved before FDA issued guidance in 2003. FDA officials told GAO that conducting post approval risk assessments for each of the antibiotics approved prior to 2003 would be prohibitively resource intensive, and that pursuing this approach could further delay progress. Instead, FDA proposed a voluntary strategy in 2010 that involves FDA working with drug companies to limit approved uses of antibiotics and increasing veterinary supervision of use. However, FDA does not collect the antibiotic use data, including the purpose of use, needed to measure the strategy's effectiveness.[16]

Pressure mounted on the FDA when, on March 23, 2012, it lost a lawsuit. A federal judge ruled that the agency must act on a proposal it made in 1977 to prevent two antibiotics important to human medicine—tetracyclines and penicillins—from being given routinely to healthy livestock. After citizen petitions in 1999 and 2005 and a lawsuit filed in 2011, the FDA took action, quietly withdrawing the proposal just before Christmas. But the judge ruled that the agency actually had to address the concerns it had identified over thirty years earlier. Drug manufacturers will have a chance to make their case that the antibiotics are safe to feed routinely to livestock. But if they aren't able

to (and science indicates they won't), the FDA must withdraw its approval of subtherapeutic uses of the drugs.

Not long after, on April 6, 2012, the FDA banned most subtherapeutic uses of one class of antibiotics, cephalosporins. These are used to treat food-borne illnesses in humans, especially children, as well as pneumonia and skin and soft tissue infections. Salmonella resistance to cephalosporin drugs is on the rise, putting the public at risk.

Five days later, the FDA announced another voluntary initiative to promote the "judicious use" of antibiotics in livestock. The agency released the final "Guidance 209: The Judicious Use of Medically Important Antimicrobial Drugs in Food-Producing Animals," along with more clarification about how to make it work. The FDA provided direction for transitioning from the use of over-the-counter antibiotics in animal feed to a new system requiring oversight by veterinarians. But without regulations in place, we have no guarantee that the pharmaceutical industry and livestock producers will voluntarily stop the use of the drugs in animals.

The FDA continues to be conflicted. It is unwilling to completely ban the dangerous and inappropriate use of antibiotics. And it currently insists that industry voluntary efforts will address this public health issue. Wallinga says, "Politics is holding public health hostage. The FDA has effectively done nothing over thirty years after first labeling this a problem. We need federal legislation—PAMTA—despite the fact that it makes the big pork producers unhappy. Unfortunately, they scream louder than the AMA and the doctors calling for PAMTA to pass."

Failure to pass the Preservation of Antibiotics for Medical Treatment Act is not surprising. The drug-health industry spent $2.3 billion lobbying from 1998 to 2011, and of this amount, $1.5 billion was from the pharmaceutical manufacturing group. Total campaign contributions to federal elected officials between 1990 and 2011 amounted to $131 million, with 66 percent going to Republicans and 34 percent to Democrats.

The Animal Health Institute (AHI) is one of the trade associations that lobby for the veterinary medicine side of the drug industry. Among the gimmicks used by the AHI is Celebrity Pet Night, where for the past fifteen years members of Congress and their staff are invited to a reception to mix and mingle with celebrities. The event features a Cutest Pets on Capitol Hill photo contest. This is just one example of how the animal drug industry hides behind the cuddly image of medicine for household pets.

AHI also represents companies that have promoted the use of another dangerous feed additive: arsenic. The FDA approved the use of the arsenic-based

drug roxarsone as a feed additive in 1944, when Franklin D. Roosevelt was president. Industry researchers had discovered that roxarsone promoted growth, increased feed efficiency, and gives the appearance of health by brightening the color of flesh. Between 1995 and 2000, 70 percent of broiler chicken producers used roxarsone feed additives. Its use is prohibited only in organic chicken production.

Arsenic does not break down in the environment; instead, it combines with other elements to form compounds. Nearly 90 percent of the arsenic fed to chickens is excreted through urine and feces. An estimated 2 million pounds of roxarsone are fed to chickens each year, contaminating much of the estimated 26 billion to 51 billion pounds of waste that broiler chickens produce each year. Most of that waste is applied to fields as fertilizer, causing arsenic to leach into soil, water, and crops.

Arsenic-based feed additives are also used in the turkey and hog industries to prevent disease and promote growth, but there is far less research on the public health and environmental impacts from its use in these industries. One study has found evidence of inorganic arsenic in waste lagoons on large hog operations where arsenic feed additives are used.[17]

Poultry farmers also use arsenic to control a common poultry disease known as coccidiosis that is caused by the coccidian parasite. Affected birds experience a variety of symptoms, including diarrhea, impaired food absorption and growth, immune suppression, and even death. While not all chickens infected with coccidia die, their meat and egg production is impaired, leading to significant economic losses.

Arsenic poses problems both in the chicken meat itself and in chicken waste. U.S. chicken consumption has increased significantly over the last several decades, and new studies demonstrate that arsenic residues may be higher in chicken meat than has been previously known. More research is necessary to understand just how much arsenic Americans consume in chicken. Arsenic is also present in chicken waste, where it converts to more dangerous forms than those originally used in the feed.

Chronic exposure to arsenic is associated with increased risk for several kinds of cancer, including bladder, kidney, lung, liver, and prostate. It is also associated with increased risk of cardiovascular disease and diabetes, as well as neurological problems in children. Each exposure contributes to a person's total arsenic exposure, and sources such as the American Cancer Society urge the importance of reducing arsenic exposure from any venue as much as possible.

The FDA set allowed levels for arsenic residues in poultry in 1951, and

these rules are long overdue for reconsideration, particularly because Americans' consumption of chicken has increased substantially since that time. In the 1940s Americans ate less than twenty pounds of poultry per person per year on average; by 2008 that had tripled to nearly sixty pounds per person. African Americans and Latinos generally eat more chicken than Caucasians and Asians, and are thus at greater risk of arsenic exposure. According to epidemiologist Dr. Keeve Nachman, science director at the Center for a Livable Future at Johns Hopkins University, the tolerance levels "predate our current understanding of the human health effects of exposure to arsenic."

In 2006 a study by IATP tested arsenic levels in the chicken meat sold at grocery stores and fast-food outlets. Of the 151 retail packages tested, 55 percent had detectable levels of arsenic. The range of brands sampled included some certified organic and others from companies that do not use arsenical feed additives. Of the non-premium and nonorganic brands, 74 percent of the retail chicken tested had detectable levels of arsenic. Of the ninety orders of fast-food chicken tested, arsenic was detectable in all samples.

The USDA Food Safety and Inspection Service (FSIS) is responsible for monitoring various residues in meat and poultry, but the agency has failed to take appropriate action to determine arsenic residues in chicken meat. In total, FSIS tested 5,786 of the approximately 72 billion broiler chickens produced between 2000 and 2008—that amounts to only one in every 12 million chickens being tested.[18] → inadequate testing

In 2010 the USDA inspector general released an evaluation of the FSIS National Residue Program and reported that "it is not accomplishing its mission of monitoring the food supply for harmful residues."[19] Two criticisms stand out. The first is that the FSIS fails to recall meat even when it finds evidence of veterinary drug residues. The second is that the FSIS, the EPA, and the FDA fail to coordinate effectively to prevent the public from harm by establishing relevant standards.[20] The demonstrated existence of arsenic residues in chicken meat is a case example of oversight failure and insufficient monitoring to protect consumers.

Tyson Foods and Perdue, two of the largest U.S. poultry companies, claim to have stopped using arsenic compounds in 2004 and 2007, respectively.[21] However, they continue to lobby for the right to use it. In testimony before an agricultural subcommittee of the U.S. House of Representatives, Steve Schwalb, Perdue's vice president of environmental sustainability, stated, "Perdue agrees to make every effort not to use arsenic compounds in its feed, but may use it where the health of the flock is a concern and other non-arsenic techniques fail to restore the flock to health in a timely manner."[22]

"The science doesn't support a ban right now," said Schwalb. "If people believe it's a safety issue, then they can take it up with the FDA."[23]

Perdue vehemently opposed a state ban on arsenic feed additives in Maryland, where, after a three-year campaign, Food & Water Watch helped pass legislation in 2012 to ban the use of roxarsone in chicken feed. Maryland, the eighth-largest producer of chicken in the United States, was the first state in the country to take steps to restrict the use of arsenic in animal feed, although the poultry industry did get several loopholes included in the bill that it will try to use to reintroduce arsenic-based drugs in the future.

Multiple studies and industry estimates suggest that between 70 percent and 88 percent of broiler chickens receive arsenic additives in their feed.[24] Even the industry estimated in 2011 that nine out of ten chickens consumed had been fed arsenic.[25]

The EPA addresses maximum levels of contaminants in the environment as well as specific instances of severe, localized contamination. In 2001, the EPA reduced the maximum contaminant levels for arsenic in drinking water from fifty parts per billion (ppb) to ten ppb, with compliance required by January 2006.[26] While the action to reduce arsenic exposure is laudable, the risk of cancer from arsenic levels at the new standard is still fifty times higher than the risk allowed for many other carcinogens.[27]

In response to publicity regarding new studies on arsenic in 2007, an FDA spokesperson stated that the agency "has no data to suggest that there have been any adverse health effects in humans" because of roxarsone in chicken feed.[28] The lack of evidence seems to have more to do with a failure to look for it than a lack of adverse effects. While the drinking water standard for arsenic has been strengthened, the standards for arsenic residues in poultry have remained unchanged by the FDA for nearly sixty years.[29]

Concerns about arsenic exposure prompted Representative Steve Israel (D-NY) to introduce the Poison-Free Poultry Act in Congress in 2009. To date this legislation has not moved forward. The combined political power of the drug and livestock industries is formidable.

Feed-additive production has become extremely concentrated, like all aspects of agribusiness. As of 2000, the pharmaceutical company Alpharma Animal Health (Alpharma) was the top producer of antibiotic feed additives and the second-largest producer of anticoccidial drugs. In 2008, King Pharmaceuticals acquired Alpharma. Alpharma is the producer of more than half of roxarsone products, and just six companies produce more than 90 percent of them.

Two years later, Pfizer, the largest drug company in the world, bought King Pharmaceuticals in a $3.6 billion deal. Pfizer, the maker of drugs like Viagra and Celebrex, is facing the loss of patent protection for the cholesterol drug Lipitor and is seeking new revenue sources. It was most interested in gaining access to King's pain treatment division and other drugs in its pipeline. Rumors abound that the industry giant will sell King's animal health division.

The eventual sale of this division may be why on June 8, 2011, just thirty days after announcing the acquisition, Pfizer stated that it would suspend the sale of roxarsone, based on new FDA data that found arsenic in the livers of chickens fed the drug. Pfizer voluntarily suspended sales, giving the FDA cover for not banning use of the drug. Advocates fear that it will be brought back on the market after stockpiles of it are used or in the event that it is sold to another company. During the thirty-day lead-up to the suspension of sales, large quantities were available to the poultry industry.

A possible sale after the voluntary suspension of 3-Nitro, roxarsone's trade name, has been mentioned in relation to a lawsuit brought against Pfizer by one of its subcontractors. In October 2011 the Chinese chemical company Rong-Yao, which manufactures roxarsone for Pfizer, filed a breach of contract lawsuit against the company for $20 million in a federal district court. Dr. Rener Chen, Rong-Yao's general manager, noted in a release, "The timing of Pfizer's decision to voluntarily suspend its sales of 3-Nitro, under the veil of the FDA study and the associated FDA pressure, is suspect as it comes at the same time as reports in the industry that Pfizer is looking to completely sell off all of its Animal Health division and remove itself from this market altogether."[30]

Consumer advocates will be watching to see if the drug is brought back on the market if Pfizer does indeed sell the Animal Health division to another company. Unfortunately, if this is the case, it is unlikely that the FDA will ban its use. FDA lacks the fortitude to stand up to the excessive political power of the economic interests benefiting from weak regulation. When the agency does act, it is to beg the food, meat, and drug industries to cooperate through voluntary programs. The FDA is unwilling to take the actions necessary to ensure that dangerous residues like arsenic are removed from the American diet.

The FDA and its political masters are even willing to sacrifice the efficacy of antibiotics, the miracle drugs that have saved millions of lives, for the sake of the meat industry. The agency's reckless refusal to take decisive action banning the nontherapeutic use of antibiotics on factory farms not only is causing a health crisis today, from antibiotic-resistant superbugs, it is risking the health of future generations.

The FDA is cowed by industry pressure, but it is also underresourced to

deal with the deadly threats that are the result of a food system out of control. With only twelve hundred inspectors to oversee all food except meat and poultry, the agency does not have the staff to inspect it vigilantly. It does not have sufficient funding to do laboratory tests for residues or to make sure that foods imported from the developing world are free of dangerous toxics or agrochemicals. Each year, sufficient funding for the agency is threatened during the increasingly antagonistic and partisan budget debates. Until the FDA is adequately funded, it will be unable to make sure that the health and safety of Americans are protected.

No one can fully escape from the impact of the FDA's failures or from the ill effects of the dysfunctional food system. In a large and industrialized nation, everyone is dependent upon the federal regulatory system to some degree. No one can grow all of the food that they eat, unless they live an entirely subsistence lifestyle. While shopping at the local farmers' market and knowing where your food comes from is part of the solution, it does not protect you from all the dangers lurking at the grocery store, at the restaurants you patronize, or when you go to Grandma's for a holiday dinner. Most of us purchase produce from the grocery store when it is out of season locally; at the very least, we depend on stores for staples. We eat at many places where we are not in control of the shopping list.

Even individuals who only purchase organic produce, avoid consuming industrialized meat and processed food, and shop at a natural food store for most products depend upon a protective and alert regulatory system to ensure that the products are free of deadly bacteria, chemicals, and residues. As organic products increasingly come from China, extremely health-conscious consumers still rely on the FDA's vigilance as we face more risks from chemical contamination. And anyone who shops for food and looks at the ingredients list depends upon the FDA for the creation and enforcement of transparent and effective labeling.

In the long term, while we should avoid processed food, shop locally, and get to know our local farmers if possible, the best solution is to build the political power to reform not only the food system but the regulatory system that governs it. In a large and complex society that has more than 300 million people, it is crucial to have a protective and fair regulatory system overseen by a federal agency willing to guard the health and safety of consumers in the face of political pressure.

It is time for food activists to embrace the need for effective regulation, rather than to acquiesce to the libertarian philosophy that we do not need regulation if we buy locally. In recent years, the FDA's SWAT team–like raids on small farms selling raw milk or goat cheese has caused a backlash against all food regulation. Most of us would agree that this is an outrageous misappropriation of resources. In a country facing so many food-related dangers, the FDA should not be policing small operations selling to consumers willing to take the risk because they know the producer and are confident of the products' safety. Yet the agency takes a pass on the real health hazards, such as the chemicals and residues in the millions of tons of imported foods.

We must demand that the USDA spend its resources wisely and protect all Americans from the hazards in the industrialized and globalized food system. We must build the political power to give members of Congress and the executive branch the backbone to stand up to the selfish economic interests of those that put their quarterly profits before the health of the American public. To have a safe food system that serves everyone, food activists must add food safety and effective regulation to the good-food movement's agenda.