

CRS Report for Congress

Meat and Poultry Inspection: Background and Selected Issues

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Summary

The U.S. Department of Agriculture's (USDA's) Food Safety and Inspection Service (FSIS) must inspect most meat, poultry, and processed egg products for safety, wholesomeness, and labeling. Federal inspectors or their state counterparts are present at all times in virtually all slaughter plants and for at least part of each day in establishments that further process meat and poultry products. Debate has ensued for decades over whether this system, first designed in the early 1900s, has kept pace with changes in the food production and marketing industries. Among the issues that the 110th Congress could be asked to examine are:

Is enough being done to address longstanding concerns about naturally occurring microbiological contamination? In 1996, FSIS added a sweeping new system known as Hazard Analysis and Critical Control Point (HACCP) — essentially plant-specific contamination prevention plans — on top of the traditional “sight-, smell-, and touch-based” inspection system. Past bills, proposing to clarify USDA's use of pathogen performance standards, could be reintroduced.

Does FSIS have adequate funding and resources, and/or should industry pay more for inspection? FSIS inspection is mainly funded through USDA's annual appropriation. Congress has consistently denied successive Administrations' proposals to impose new user fees. Meanwhile, FSIS also is working on a new “risk based inspection system” aimed at focusing its existing resources in plants that pose greater risks than others.

Should state-inspected meat and poultry products be allowed in interstate commerce? Bills to lift the longstanding ban on such shipments could be offered.

Should USDA be given more authority to recall suspect meat and poultry products? Bills to broaden recall authority also could be offered, as in the past.

Is legislation needed to improve the ability to trace animals, meat, and poultry products? Past bills, to require a system for tracing all federally inspected meat and poultry from the live animal through processing to the ultimate consumer, or, alternatively, to establish differing nationwide livestock identification systems for animal disease purposes only, could be reintroduced.

Should Congress further address animal welfare? Bills proposed in the 109th Congress would have banned the slaughter of nonambulatory livestock, and banned horse slaughter for human consumption.

Should U.S. food safety responsibilities be consolidated under a single agency? Companion bills did not advance in the 109th Congress, but there is expected to be continued interest in them in the 110th Congress. This report will be updated if significant developments ensue.

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Background on the Programs

The U.S. Department of Agriculture's (USDA's) Food Safety and Inspection Service (FSIS) is responsible for inspecting most meat, poultry, and processed egg products for safety, wholesomeness, and proper labeling. Federal inspectors or their state counterparts are present at all times in virtually all slaughter plants and for at least part of each day in establishments that further process meat and poultry products. The Food and Drug Administration (FDA), within the U.S. Department of Health and Human Services (HHS), is responsible for ensuring the safety of virtually all other human foods, including seafood, and for animal drugs and feed ingredients.¹

Statutory Authorities

Federal Meat Inspection Act of 1906. This law as amended (21 U.S.C. 601 *et seq.*) has long required USDA to inspect all cattle, sheep, swine, goats, horses, mules, and other equines brought into any plant to be slaughtered and processed into products for human consumption.²

Poultry Products Inspection Act of 1957. This law as amended (21 U.S.C. 451 *et seq.*) makes poultry inspection mandatory for any domesticated birds intended for use as human food. The current list of included species is chickens, turkeys, ducks, geese, guineas, ratites (ostrich, emu, and rhea), and squabs (pigeons up to one month old).

Agricultural Marketing Act of 1946. Under this law as amended (7 U.S.C. 1621), FSIS also provides voluntary inspection for buffalo, antelope, reindeer, elk,

¹ This report does not compare and contrast FSIS responsibilities with those of FDA, which operates under a considerably different regulatory framework. These differences could have significance in the longstanding debate over the need, if any, for reorganizing U.S. food safety authorities and programs.

² The FY2006 USDA appropriation (P.L. 109-97, Section 798) amends the Meat Inspection Act to alter the statutory designation of livestock which are required to undergo mandatory inspection if destined for human food — from “cattle, sheep, swine, goats, horses, mules, and other equines” to “amenable species.” Section 798 then defines “amenable species” to mean: (1) “those species subject to the provisions of the [Meat Inspection] Act on the day before the date of enactment” of the 2006 appropriation (i.e., the same species previously delineated in the inspection act); (2) “any additional species of livestock that the Secretary considers appropriate.” These changes were made during the House-Senate conference on the appropriation measure.

migratory waterfowl, game birds, and rabbits, which the industry can request on a fee-for-service basis.³

Egg Products Inspection Act. This law as amended (21 U.S.C. 1031 *et seq.*) is the authority under which FSIS assures the safety of liquid, frozen, and dried egg products, domestic and imported, and the safe disposition of damaged and dirty eggs. FDA holds regulatory authority over shell eggs used in restaurants and sold in stores.

USDA Meat Grading

USDA meat and poultry grading is distinct and separate from the FSIS safety inspection program. Upon request, firms may request that inspectors from a separate USDA agency, the Agricultural Marketing Service (AMS), grade their products for quality attributes, but only after it has been cleared by FSIS for safety and wholesomeness. Unlike safety inspection, which is mandatory and largely covered by appropriated funds, grading services are voluntary and funded by industry user fees.

Nationally uniform quality grades are used to convey, to buyers and sellers, such traits as tenderness, flavor, and juiciness, and so forth. For example, AMS now grades beef carcasses as prime, choice, select, standard and commercial, utility, cutter, and canner; these grades are not usually visible on individual retail cuts but can appear on the packages. Grades are also available for veal, lamb, and poultry. Legislative authority for quality (and yield) grades comes through the Agricultural Marketing Act (7 U.S.C. 1621).

System Basics

Coverage. FSIS's legal inspection responsibilities begin when animals arrive at slaughterhouses, and they generally end once products leave processing plants. Certain custom slaughter and most retail store and restaurant activities are exempt from federal inspection; however, they may be under state inspection.

Plant Sanitation. No meat or poultry establishment can slaughter or process products for human consumption until FSIS approves in advance its plans and specifications for the premises, equipment, and operating procedures. Once this approval is granted and operations begin, the plant must continue to follow a detailed set of rules that cover such things as proper lighting, ventilation, and water supply; cleanliness of equipment and structural features; and employee sanitation procedures.

³ These meat and poultry species (which are not specifically covered by the mandatory inspection statutes) are regulated by FDA under the Federal Food, Drug, and Cosmetic Act, FFDCFA, 21 U.S.C. 301 *et seq.*) if they are not inspected under the voluntary FSIS program. FDA has jurisdiction over meat products from such species in interstate commerce, even if they bear the USDA inspection mark.

HACCP. Plants are required to have a Hazard Analysis and Critical Control Point (HACCP) plan for their slaughter and/or processing operations. Essentially, a plant must identify each point in the process where contamination could occur, called a “critical control point,” have a plan to control it, and document and maintain records. Under HACCP regulations, all operations must have site-specific standard operating procedures (SOPs) for sanitation. USDA inspectors check records to verify a plant’s compliance (see “Selected Issues” for more on HACCP).

Slaughter Inspection. FSIS inspects all meat and poultry animals to look for signs of disease, contamination, and other abnormal conditions, both before and after slaughter (“antemortem” and “postmortem,” respectively), on a continuous basis — meaning that no animal may be slaughtered and dressed unless an inspector has examined it. One or more federal inspectors are on the line during all hours the plant is operating.

Processing Inspection. The inspection statutes appear to be silent on how frequently USDA inspector must visit facilities that produce processed products like hot dogs, lunch meat, prepared dinners, and soups. Under current policies, processing plants visited once every day by an FSIS inspector are considered to be under continuous inspection in keeping with the laws. Inspectors monitor operations, check sanitary conditions, examine ingredient levels and packaging, review records, verify HACCP processes, and conduct statistical sampling and testing of products during their on-site visits.

Pathogen Testing. The HACCP rule also mandates two types of microbial testing: for generic *E. coli* and for *Salmonella*. Levels of these two organisms are indicators of conditions that either suppress or encourage the spread of such potentially dangerous bacteria as *Campylobacter* and *E. coli* O157:H7, as well as *Salmonella* itself. Test results (plants test for *E. coli* and FSIS for *Salmonella*) help FSIS inspectors verify that plant sanitation procedures are working, and to identify and assist plants whose process controls may be underperforming.

In the initial years of HACCP implementation, plants that failed three consecutive *Salmonella* tests could have their USDA inspectors withdrawn. This would effectively shut down the plant until the problem could be remedied. A federal court ruling in 2000, upheld on appeal in 2001, made such enforcement illegal. Nonetheless, FSIS inspectors still test samples for *Salmonella* and use the results as one of a number of indicators of plant performance.⁴

Enforcement. FSIS has a range of enforcement tools to prevent adulterated or mislabeled meat and poultry from reaching consumers. On a day-to-day basis, if plant conditions or procedures are found to be unsanitary, an FSIS inspector can, by refusing to perform inspection, temporarily halt the plant’s operation until the problem is corrected. FSIS can condemn contaminated, adulterated, and misbranded

⁴ FSIS also samples meat tissues for drug and pesticide residues, but FDA and the FFDCFA, along with the Environmental Protection Agency and its statutes are the guiding authorities for such residues.

products, or parts of them, and detain them so they cannot progress down the marketing chain.

Other tools include warning letters for minor violations; requests that companies voluntarily recall a potentially unsafe product; a court-ordered product seizure if such a request is denied; and referral to federal attorneys for criminal prosecution. Prosecutions under certain conditions may lead to the withdrawal of federal inspection from offending firms or individuals, which results in plant closure.

Funding. Federal appropriations pay for most, but not all, mandatory inspection. In FY2006, FSIS received an annual appropriation of approximately \$830 million. In addition, FSIS uses revenue from fees paid by the meat and poultry industries for FSIS inspection that occurs beyond regularly scheduled shifts and on holidays, and by private laboratories that apply for FSIS certification to perform official meat testing and sampling. In FY2006, revenue from the fees amounted to approximately \$120 million in additional program support.

Staffing. FSIS carries out its duties with total staff of nearly 10,000. Approximately 7,600 of FSIS's employees, roughly 1,000 of them veterinarians, are in nearly 5,900 plants (1,700 of them slaughter establishments) nationwide.

State Inspection. Twenty-eight states have their own meat and/or poultry inspection programs covering approximately 2,000 small or very small establishments. The states run the programs cooperatively with FSIS, which provides up to 50% of the funds for operating them, comprising about \$50 million of the total FSIS budget annually. A state program operating under a cooperative agreement with FSIS must demonstrate that its system is equivalent to federal inspection. However, meat and poultry products produced under state inspection are limited to intrastate commerce only. In states that have discontinued their inspection systems for meat or poultry (or both), FSIS has assumed responsibility for inspection at the formerly state-inspected plants. However, actual inspection is performed by state personnel.

Import Inspection. FSIS conducts overseas evaluations to determine that imports from foreign countries are processed under equivalent inspection systems; agency officials also verify equivalency by visiting various foreign slaughtering and processing operations. A plant seeking to export meat or poultry to the United States must first receive FSIS certification. At U.S. ports of entry, meat and poultry import shipments must first clear Department of Homeland Security (DHS) inspection to assure that only shipments from countries free of certain animal and human disease hazards are allowed entry. This function was transferred to DHS from USDA's Animal and Plant Health Inspection Service (APHIS) when DHS was established by the Homeland Security Act of 2002 (P.L. 107-296). After DHS inspection, imported meat and poultry shipments go to nearby FSIS inspection facilities for final clearance into interstate commerce.

Selected Issues

Microbiological Contamination and HACCP

Development of HACCP. In the early 1990s, following years of debate over how to respond to mounting evidence that invisible, microbiological contamination on meat and poultry posed greater public health risks than visible defects (the focus of traditional inspection methods), FSIS began to add testing for pathogenic bacteria on various species and products to its inspection system.

In 1995, under existing statutes, FSIS published a proposed rule to systematize these program changes in a mandatory program called the Hazard Analysis and Critical Control Point (HACCP) system. In this system, firms must analyze risks in each phase of production, identifying and then monitoring “critical control points” for preventing such hazards, with corrective actions taken when necessary. Record keeping and verification are used to ensure that the system is working. FSIS published the final rule on July 25, 1996, and since January 2000 all slaughter and processing operations are required to have HACCP plans in place. HACCP is intended to operate as an adjunct to the traditional methods of inspection, which still are mandatory under the original statutes.⁵

Pathogen Performance Standards and *Salmonella*. The meat and poultry inspection statutes do not give USDA the authority to use *Salmonella* standards as the basis for withdrawing inspection from a plant that has not met them, a federal court ruled in 2000, and an appeals court upheld in 2001. Subsequently, USDA has adopted the position that the court decision did not affect the agency’s ability to use the standards as part of the verification of plants’ sanitation and HACCP plans.

Nonetheless, the appeals court ruling supports arguments of those who say that pathogen testing results should not be a basis for enforcement actions until scientists can determine what constitutes an unsafe level of *Salmonella* in ground meat and a number of other meat and poultry products. Consumer groups and other supporters of mandatory testing and microbiological standards, as well as of increased enforcement powers, have used the case to bolster their argument for amending the meat and poultry inspection statutes to specify microbiological standards.

FSIS has reported its concern about “increases in *Salmonella* rates observed over the past three years (2003-2005) among the three poultry product categories, broiler carcasses, ground chicken, and ground turkey. Increases were observed for all three classes in 2003 and 2005 and in each year for broiler carcasses.”⁶

⁵ The final rule appeared in 61 *Federal Register* 38805-38855.

⁶ Report on FSIS testing results for *Salmonella*, posted with those for *E. coli* O157:H7 on the Internet at [<http://www.fsis.usda.gov/Science/Microbiology/index.asp>]. On July 5, 2006, the advocacy group Food & Water Watch released the names of 106 broiler chicken plants in 27 states and Puerto Rico that failed to reach federal *Salmonella* standards between 1998

(continued...)

To address the problem, in early 2006 the agency launched an initiative to reduce the pathogen in raw meat and poultry products, including the concentration of more inspection resources at establishments with higher levels, and quarterly rather than annual reporting of *Salmonella* test results. Sampling frequency will be based on a combination of factors such as a plant's regulatory history and its incidence of the pathogen.⁷ A notice and request for comments on this initiative was published in the February 27, 2006, *Federal Register*. Results for the first three quarters of 2006 have been posted on the agency's website (see footnote 6).

Scientific Advice on Performance Standards

National Advisory Committee on Microbiological Criteria for Foods:

The committee, established in 1988 to provide scientific advice to the Secretaries of Agriculture and of Health and Human Services on public health issues, concluded in a report issued in October 2002 that "performance standards that meet the principles as outlined in this document [i.e., standards that are based on quantitative rather than qualitative data] are valuable and useful tools to define an expected level of [pathogen] control in one or more steps in the process." (The report is at [http://www.fsis.usda.gov/OPHS/nacmcf/rep_stand.htm].)

Institute of Medicine-NRC: A second review of microbiological performance standards, *Scientific Criteria to Ensure Safe Food*, was released in 2003 by the Institute in collaboration with the National Research Council (NRC). Among many recommendations, this report calls on Congress to "grant the regulatory agencies clear authority to establish, implement, and enforce food safety criteria, including performance standards, and the flexibility needed within the administrative process to update these criteria."

The Institute report also makes specific recommendations for FSIS to improve meat and poultry safety including: (1) to conduct surveys to evaluate changes over time in the microbiological status of certain components of processed meats and poultry; (2) to expand *E. coli* O157:H7 testing, identify control points for *E. coli* O157:H7 back to the farm level, and inform consumers that even irradiated ground beef must be cooked to a temperature that kills the pathogen; and (3) to greatly expand generic *E. coli* criteria, and *Salmonella* performance standards, for beef trim intended for grinding. (This report may be accessed at [<http://www.nap.edu/catalog/10690.html>].)

***E. coli* O157:H7.** The U.S. Centers for Disease Control and Prevention (CDC) noted that "*E. coli* O157:H7 is one of hundreds of strains of the bacterium *Escherichia coli*. Although most strains are harmless and live in the intestines of healthy humans and animals, this strain produces a powerful toxin and can cause

⁶ (...continued)

and 2005. The report is online at [<http://www.foodandwaterwatch.org/food/foodsafety/meat-inspection-1/press-release-salmonella-failures-in-chicken-plants>].

⁷ *Food Chemical News*, July 3, 2006.

severe illness. *E. coli* O157:H7 was first recognized as a cause of illness in 1982 during an outbreak of severe bloody diarrhea; the outbreak was traced to contaminated hamburgers. Since then, most infections have come from eating undercooked ground beef.” CDC also noted that “... people have also become ill from eating contaminated bean sprouts or fresh leafy vegetables such as lettuce and spinach. Person-to-person contact in families and child care centers is also a known mode of transmission. In addition, infection can occur after drinking raw milk and after swimming in or drinking sewage-contaminated water.”⁸

In October 1994, FSIS began testing samples of raw ground beef for *E. coli* O157:H7 and declared that any such product found with this pathogen would be considered adulterated — the first time a foodborne pathogen on raw product was declared an adulterant under the meat inspection law. Industry groups immediately asked a Texas federal court for a preliminary injunction to halt this effort, on the grounds that it was not promulgated through appropriate rulemaking procedures, was arbitrary and capricious, and exceeded USDA’s regulatory authority under law. In December 1994, the court denied the groups’ request, and no appeal was filed, leaving the program in place. FSIS has taken tens of thousands of samples since the program began; to date, several hundred samples have tested positive.

In September 2002, FSIS issued a press release stating that “[t]he scientific data show that *E. coli* O157:H7 is more prevalent than previously estimated,” and in October 2002 the agency published a notice requiring manufacturers of all raw beef products (not just ground beef) to reassess their HACCP plans and add control points for *E. coli* O157:H7 if the reassessment showed that the pathogen was a likely hazard in the facility’s operations. FSIS inspectors are to verify that corrective steps have been taken and conduct random testing of all beef processing plants, including all grinders (some previously had been exempted). In addition, the agency announced guidelines for grinding plants advising them to increase the level of pathogen testing by plant employees, and to avoid mixing products from different suppliers.⁹

FSIS reported that of 10,976 ground beef samples tested in 2005, and 8,010 samples tested in 2004, approximately 0.17% tested positive each year for *E. coli* O157:H7, part of a significant decline in the percentage of positive samples since 2000, when it was 0.86%. FSIS asserted that the reduction reflected the success of its HACCP-based and related regulatory policies. A CDC report issued on April 14, 2006, indicated that the incidence of infections caused by *E. coli* O157:H7 had declined significantly from the 1996-1998 baseline through 2005, although most of the decline took place before 2005.¹⁰

⁸ Background information on this pathogen may be viewed at the following CDC website: [http://www.cdc.gov/ncidod/dbmd/diseaseinfo/escherichiacoli_g.htm#What%20is%20Escherichia%20coli%20O157:H7]. For more information on the widely publicized outbreaks in 2006 that were linked to produce, e.g., spinach produced in California, see CRS Report RL33722, *Food Safety: Federal and State Response to the Spinach E. Coli Outbreak*, by Donna V. Porter and Sarah A. Lister.

⁹ *Federal Register* 67 FR 62325.

¹⁰ Data are from the preliminary CDC FoodNet report, which can be viewed at

In 2006 (through mid-December), FSIS announced eight recalls due to *E. coli* O157:H7 contamination, most of ground beef products. The largest, in May, involved more than 156,000 pounds.¹¹

Listeria monocytogenes. In February 2001, FSIS published a proposed rule to set performance standards that meat and poultry processing firms would have to meet to reduce the presence of *Listeria monocytogenes* (*Lm*), a pathogen in ready-to-eat foods (e.g., cold cuts and hot dogs). The proposal covered over 100 different types of dried, salt-cured, fermented, and cooked or processed meat and poultry products. *Lm* causes an estimated 2,500 illnesses and 499 deaths each year (from listeriosis), and has been a major reason for meat and poultry product recalls.

The proposed regulations raised a controversy among affected constituencies. The meat industry argued that the benefits to consumers would not outweigh the cost to packers of additional testing. Representatives of food manufacturers criticized the proposed regulations for covering some categories of foods too broadly and heavily, while not covering some other high-risk foods at all (such as milk, which is under FDA jurisdiction). Consumer groups said the proposed rule would not require enough testing in small processing plants and that products not tested for *Lm* should not be labeled “ready-to-eat” because they would still require cooking to be 100% safe.

Interest in the *Listeria* issue had grown in 1998 and 1999, following reports of foodborne illnesses and deaths linked to ready-to-eat meats produced by a Sara Lee subsidiary.¹² Interest increased significantly after October 2002, when Pilgrim’s Pride Corporation recalled a record-breaking 27.5 million pounds of poultry lunch meats for possible *Lm* contamination after a July 2002 outbreak of listeriosis in New England. CDC confirmed 46 cases of the disease, with 7 deaths and 3 stillbirths or miscarriages. The recall covered products made as early as May 2002, and officials stated that very little of the meat was still available to be recovered.

In December 2002, FSIS issued a directive to inspection program personnel giving new and specific instructions for monitoring processing plants that produce hot dogs and deli meats.¹³ In June 2003, FSIS announced the publication of an interim final rule to reduce *Listeria* in ready-to-eat meats. Rather than set performance standards, as the February 2001 proposed rule would have, the new regulation requires plants that process RTE foods to add control measures specific to *Listeria* to their HACCP and sanitation plans, and to verify their effectiveness by testing and disclosing the results to FSIS. The rule directs FSIS inspectors to conduct random tests to verify establishments’ programs. Plants are subject to different

¹⁰ (...continued)

[<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5514a2.htm>].

¹¹ Updates are at the FSIS website: [http://www.fsis.usda.gov/FSIS_Recalls/index.asp]; a list of both FSIS and FDA recalls is at [<http://www.recalls.gov/food.html>].

¹² Source: *Food Chemical News*, various issues.

¹³ The guidelines can be found on the FSIS website at [<http://www.fsis.usda.gov>].

degrees of FSIS verification testing depending upon what type of control steps they adopt in their HACCP and sanitation plans.¹⁴

On January 4, 2005, the Consumer Federation of America (CFA) issued a report sharply criticizing USDA's *Listeria* rulemaking. CFA asserted that the Department essentially adopted meat industry positions in weakening the final rule, such as by deleting proposed plant testing requirements and by not explicitly requiring that HACCP plans include *Listeria* controls. In 2003, *Listeria* illnesses increased by 22%, CFA contended, citing CDC data.¹⁵

USDA and meat industry officials countered that the number of product recalls related to *Listeria* had declined from 40 in 2002 to 14 in 2003, that the rise in *Listeriosis* cases was quite small in 2003 after four years of declines, and that the interim rule provides more incentives for plants to improve safety. The CDC's 2005 FoodNet reported that the incidence of foodborne illness caused by *Listeria* experienced an overall 40% decline from a 1996-1998 baseline, although most of this appears to have occurred pre-2005.

Large recalls continue, however. For example, on December 10, 2005, FSIS announced that ConAgra Foods was voluntarily expanding — to 2.8 million pounds — a December 1, 2005, recall of approximately 9,550 pounds of various bologna, ham, and turkey lunch meal products, due to possible contamination after cheese provided by a supplier tested positive for *Lm*. Another 28 *Listeria*-related recalls were announced during 2005, involving approximately 649,000 pounds of processed meat and poultry products, according to the agency's website. The website had posted six *Listeria* recalls in 2006 through mid-December.¹⁶

In Congress. In recent years, bills have been offered to add language to the inspection laws clarifying the Secretary's authority to set enforceable performance standards. Similar measures could be introduced in the 110th Congress.

Funding and Resources

From time to time in the past, FSIS has had difficulty in sufficiently staffing its service obligations to the meat and poultry industries. Usually a combination of factors causes these shortages, including new technologies that increase plant production speeds and volume, insufficient appropriated funds to hire additional inspectors at times of unexpected increases in demand for inspections, and problems in finding qualified people to work in dangerous or unpleasant environments or at remote locations. These staffing problems were complicated somewhat by the addition of HACCP requirements on top of the traditional inspection duties.

Risk-Based Inspection System. More recently, FSIS has been working toward what it calls "a more robust risk-based inspection system" (RBIS), which

¹⁴ See the FSIS website for more details on the rule.

¹⁵ CFA website: [<http://www.consumerfed.org/>].

¹⁶ FSIS recall website: [http://www.fsis.usda.gov/FSIS_Recalls/index.asp].

would enable the agency to rebalance its existing inspection resources, Administration officials contend. The objective of this initiative is “to improve public health by placing greater inspection and verification emphasis on federally inspected meat and poultry establishments that pose greater risks. In a more robust RBIS, each establishment’s risk could be categorized, and the type and intensity of inspection could be based primarily on that risk.”¹⁷ FSIS said it planned to begin risk-based inspections in processing (not slaughter) establishments in FY2007; its FY2007 budget sought a \$2.6 billion increase for this effort.

Public comments to FSIS on RBIS, and hearings by a House Appropriations subcommittee, indicate that many agree in concept with risk-based inspection, but are concerned that the agency has provided too few specifics on how it might be implemented. A few warned that it could undermine rather than strengthen safety oversight, and wondered whether the agency has the statutory authority to change inspection frequency.¹⁸

User Fee Proposals. To ease funding pressures, most administrations over the past 20 years have proposed to charge the meat-packing industry new user fees sufficient to cover the entire cost or a portion of federal inspection services. (FSIS has been authorized since 1919 to charge user fees for holiday and overtime inspections, and does so). The primary rationale for more extensive user fees has been that resources would then be adequate to hire new inspectors as necessary. USDA economists estimate that the cost passed on to consumers from such a fee would be no more than one cent per pound. Meat industry and consumer groups have consistently opposed increased fees, arguing that food safety is a public health concern that merits taxpayer support.

In his FY2007 budget, the President proposed a \$987 million program level for FSIS; however, he proposed the collection of new user fees to offset \$105 million of the total. (These would be in addition to an estimated \$124 million in current, previously authorized user fees.) Like the previous year’s user fee proposal, the new fees would cover inspection costs beyond a plant’s single primary approved shift.

In Congress. FSIS inspection costs are mainly funded through USDA’s annual appropriation. The FY2007 appropriation (H.R. 5384) cleared the House and was reported by the Senate Appropriations Committee, but a final version did not pass in the 109th Congress. The continuing resolution (H.J.Res. 102), now funding most federal agencies through February 15, 2007, effectively limits FSIS to its FY2006 level of approximately \$830 million.

¹⁷ “Measuring Establishment Risk Control for Risk-based Inspection,” paper for May 23-24, 2006, meeting of the National Advisory Committee on Meat and Poultry Inspection, at [http://www.fsis.usda.gov/regulations_&_policies/National_Advisory_Committee_on_Meat_&_Poultry/index.asp]. Information on the committee’s October 12-13, 2006, meeting on risk-based inspection is also posted here.

¹⁸ “Risk-based inspection comments posted by FSIS, *Food Chemical News*, November 27, 2006; also, *Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations for 1997* (Pt. 1), Hearings before a Subcommittee of the Committee on Appropriations, U.S. House of Representatives, 104th Congress, 2nd session.

State Inspected Products

As noted, current federal law prohibits state-inspected meat and poultry plants from shipping their products across state lines, a ban that many states and small plants want to overturn. Limiting state-inspected products to intrastate commerce is unfair, these states and plants argue, because their programs must be, and are, “at least equal” to the federal system. While state-inspected plants cannot ship interstate, foreign plants operating under USDA-approved foreign programs, which must be “equivalent” to the U.S. program, can export meat and poultry products into and sell them anywhere in the United States.

Those who oppose making state-inspected products eligible for interstate commerce argue that the state programs are not required to have the same level of safety requirements and oversight as the federal, or even the foreign, plants. For example, foreign-processed products are subject to U.S. import reinspection at ports of entry. These opponents of interstate shipment note that a recent FSIS review, which found all 28 state programs to be at least equal to the U.S. program, was based largely on self-assessments.

In Congress. Lawmakers periodically have offered legislation that would authorize the shipment of state-inspected products across state lines, and could do so again in the 110th Congress.

“At Least Equal to” vs. “Equivalence”

According to FSIS, “at least equal to” means “that the food safety and other consumer protection measures effected by a State program address the same issues addressed by the Federal (FSIS) program, and the results of the State’s approach are to be at least as effective as those of the Federal program. The State program need not take exactly the same action as the Federal program.”

(FSIS Directive 5720.2, Revision 3, November 16, 2004)

“Equivalence” is a somewhat different concept. “Meat and poultry products exported from another nation must meet all safety standards applied to foods produced in the United States. However, under international law, food regulatory systems in exporting countries may employ sanitary measures that differ from those applied domestically by the importing country. The United States makes determinations of equivalence by evaluating whether foreign food regulatory systems attain the appropriate level of protection provided by our domestic system. Thus, while foreign food regulatory systems need not be identical to the U.S. system, they must employ equivalent sanitary measures that provide the same level of protection against food hazards as is achieved domestically.”

(FSIS, “Equivalence Process,” accessed on the internet at [http://www.fsis.usda.gov/regulations_&_policies/equivalence_process/index.asp].)

Recall and Enforcement Proposals

Currently, the Agriculture Secretary must go to the courts to obtain an order to seize and detain suspected contaminated products if a firm refuses to issue a recall voluntarily. The GAO has criticized agencies' efforts to ensure that companies carry out recalls quickly and efficiently, particularly of products that may carry severe risk of illness. For example, an October 2004 GAO report concluded that the agencies do not know how well companies are carrying out recalls and are ineffectively tracking them. As a result, most recalled items are not recovered and thus may be consumed, GAO reported.¹⁹

At past hearings, consumer and food safety advocacy groups have testified in favor of obtaining these new enforcement tools to improve food safety in general, and to strengthen USDA's enforcement of the new HACCP system in particular. These groups have asserted that civil fines would serve as an effective deterrent and could be imposed more quickly than criminal penalties or the withdrawal of inspection. They also have argued that the authority to assess civil penalties would permit USDA to take stronger action against "bad actors" — processors who persistently violate food safety standards. Food safety advocates argue that FSIS should have the authority to mandate product recalls as a backup guarantee in case voluntary recalls moved too slowly or were not comprehensive enough.

Meat and poultry industry trade associations have testified in opposition to granting USDA new enforcement powers. Both producers and processors argue that current authorities are sufficient and that only once has a plant refused to comply with USDA's recommendation to recall a suspected contaminated product. Industry representatives have testified that USDA's current authority to withdraw inspection, thereby shutting down a plant, is a strong enough economic penalty to deter potential violators and punish so-called bad actors. Furthermore, they say, new enforcement powers would increase the potential for plants to suffer drastic financial losses from suspected contamination incidents that could ultimately be proven false. Some observers argue that much still needs to be done to educate consumers and restaurateurs about safe meat and poultry handling and cooking practices.

In August 2004, the consumer group Center for Science in the Public Interest (CSPI) began a national campaign to urge USDA to publicize the names of retail outlets where recalled meat has been distributed, so that consumers can learn more quickly whether they have purchased potentially contaminated products. USDA and industry leaders have contended that distribution records are proprietary, and exempt from provisions of the Federal Freedom of Information Act; such information, they argue, should be limited mainly to public officials so that they can monitor recalls. However, in the March 7, 2006, *Federal Register*, FSIS proposed posting on its website the names of retailers who have products subject to a voluntary recall. The public comment period closed June 11, 2006; a final rule was pending in late 2006.

¹⁹ *Food Safety: USDA and FDA Need to Better Ensure Prompt and Complete Recalls of Potentially Unsafe Food*, GAO-05-51.

In Congress. Bills to enhance the effectiveness of meat and poultry recalls have been introduced in successive Congresses and could reappear in the 110th Congress. They have included proposals to give USDA (and FDA) the authority to require recalls, to require food companies to notify USDA or FDA if they know a product is adulterated or misbranded, and to specify civil penalties for violations.

Meat Traceability

Recalls imply the ability to quickly trace the movement of products. On September 30, 2003, USDA's OIG released an audit report on a 2002 meat recall by Con Agra (see "*E. coli* O157:H7," below). The report recommends "that FSIS reassess its management control process over ... recall operations ... by ensuring that ground beef is traceable from manufacturing to point-of-sale and that adequate production records are maintained to facilitate traceback."

Some argue that improved traceability capabilities would have enabled USDA to determine the whereabouts of all related cattle of potential interest in the three U.S. case of BSE (bovine spongiform encephalopathy, or "mad cow disease"). The traceability issue has also been debated in connection with protecting against agroterrorism; verifying the U.S. origin of live cattle and meat products for export; and facilitating recalls to prevent or contain foodborne illness outbreaks, among other things.

Supporters of animal ID and meat traceability point out that most major meat-exporting countries already have domestic animal ID systems. The U.S. meat industry argued in the past that such a system would not be based on sound science, and would be technically unworkable. However, since the domestic BSE case, the industry, USDA, and some Members of Congress have been actively pursuing adoption of a national animal ID (but not meat traceability) system, focused on animal disease control rather than food safety *per se*. Among other issues are cost, need for a mandatory rather than voluntary system, potential producer liability, and privacy of records.

In Congress. Several bills were introduced in the 108th and 109th Congresses to amend the meat and poultry acts by requiring a system for tracing all federally inspected meat and poultry from the live animal through processing to the ultimate consumer. Others would have required the establishment of a nationwide identification system only for live animals. Another would have created a "Livestock Identification Board" with voting members from industry to oversee a national program.²⁰

BSE

North American Cases. Through December 2006, 11 native cases of BSE had been reported in North America. Canada reported its first case in May 2003. The United States reported its first case in December 2003 (although found in

²⁰ See CRS Report RL32012, *Animal Identification and Meat Traceability*, by Geoffrey S. Becker.

Washington state, it too was Canadian-born). Canada has since reported seven more. The United States has found two more cases, the most recent in late February 2006 in a 10-year-old Alabama beef cow.²¹

In epidemiological investigations of the three U.S. cases, the U.S. Department of Agriculture (USDA) was unable to track down all related animals of interest, but those that were located tested negative for the disease. Despite a beef recall, some meat from the first U.S. BSE cow may have been consumed, USDA said, adding, however, that the highest-risk tissues never entered the food supply. No materials from the other two U.S. cows entered the food supply, USDA also said. In the recent Alabama case, authorities were unable to determine the cow's herd of origin.

Animal health officials initially indicated that all of the North American cases were caused by the consumption of BSE-contaminated feed. However, USDA reportedly now believes that the two native-born U.S. cattle had "atypical" BSE, which differs from other cases. If these cases are determined to be "spontaneous," that may affect future control strategies.

BSE Safeguards.²² FSIS is one of the three federal agencies primarily responsible for keeping BSE out of the food supply. The other two agencies involved in BSE are USDA's Animal and Plant Health Inspection Service (APHIS), which handles primarily the animal disease aspects, and FDA, which regulates feed ingredients. After the first U.S. BSE case, FSIS published, as interim final rules in the January 12, 2004, *Federal Register*, several actions to bolster U.S. BSE protection systems, effective immediately:

- Downer (nonambulatory) cattle are no longer allowed into inspected slaughter and processing facilities.
- Cattle selected for testing cannot be marked as "inspected and passed" until confirmation is received that they have tested negative for BSE.
- Specified risk materials (SRM), which include the skull, brain, trigeminal ganglia, eyes, vertebral column, spinal column, and dorsal root ganglia of cattle over 30 months of age, and the small intestine of cattle of all ages, are now prohibited from the human food supply.
- Slaughter facilities are required to develop and implement procedures to remove, segregate, and dispose of SRM and

²¹ For more detailed discussion of these and other BSE issues, and links to other CRS reports, see CRS Report RS22345, *BSE ("Mad Cow Disease"): A Brief Overview*, by Geoffrey S. Becker.

²² For additional details on the following discussion see CRS Report RL32199, *Bovine Spongiform Encephalopathy (BSE, or 'Mad Cow Disease'): Current and Proposed Safeguards*, by Geoffrey S. Becker and Sarah A. Lister.

make information readily available for review by FSIS inspection personnel.

- SRM from cattle 30 months or older cannot be in a product labeled as “meat” if derived from advanced meat recovery (AMR) technology, which USDA said would help ensure it does not contain spinal tissue.
- Mechanically separated meat may not be used for human food.
- Air injection stunning is banned, to ensure that portions of the animal brain are not dislocated into the carcass.

The FSIS actions, which remain in effect, were in addition to other BSE regulatory safeguards that have been in place for several years. These include import controls and ongoing BSE surveillance through carcass testing by APHIS, and restrictions on the feeding of certain mammalian proteins to cattle by FDA (see box).

The FDA “Feed Ban”

The FDA Center for Veterinary Medicine (CVM), responsible for the safety of animal feeds, began prohibiting the use of most mammalian protein in feeds for ruminants in August 1997, a restriction commonly called the “feed ban.” This ban did not prohibit the inclusion of potential bovine risk materials such as brain and spinal cord in all animal feeds, but only those feeds intended for ruminants. FDA required that feeds containing ruminant material be labeled with a prohibition against feeding to ruminants, and that firms and farms effectively separate prohibited and non-prohibited feeds in production, shipping and feeding. The ban exempted certain bovine by-products, such as blood, milk, gelatin and restaurant plate waste, on the premise that the exempted materials posed a minimal risk of transmission.

On October 6, 2005, FDA published a proposed rule banning some SRM (mainly brains and spinal cords from cattle 30 months of age and older, and from all cattle not passed for human food) from all animal feeds, including pet food. The agency said its rule would remove those cattle parts responsible for 90% of potential BSE infectivity. The public comment period on this rule ended on December 20, 2005; a final rule was pending in mid-December 2006.

Meanwhile, Canada finalized a similar but somewhat more extensive amendment to its own feed rules in June 2006.

Additional USDA actions in the wake of the December 2003 BSE discovery have included more attention to implementing a nationwide animal identification (ID) program that would enable all cattle and other animal movements to be traced within 48 hours in cases of animal disease; and an intensive, one-time BSE testing program for higher-risk cattle.

After more than two years of testing, through August 2006, nearly 788,000 animals had been tested, all but two negative for BSE (20,000 had been tested in 2003). By fall 2006, the Department had scaled back its testing to approximately 2,000 cattle monthly, after consulting a May 2006 peer review of the results of its more intensive effort. Officials stress that BSE surveillance has been to assess the likely incidence of BSE in the U.S. cattle herd, not to test for meat safety.

In Congress. Although BSE remains a high priority for many Members of Congress, much of the recent interest has focused on trade rather than food safety concerns. Japan and Korea, once among the four leading markets for U.S. beef, did not clear the way for the return of some U.S. beef products until late 2005 and 2006, respectively. Exports to Japan are still well below previous levels, and Korean inspection procedures have essentially kept that market closed to the United States (as of December 2006). Many Members of Congress have expressed increasing frustration over the situation.

Humane Slaughter

Under the Federal Meat Inspection Act, FSIS inspectors are responsible for enforcing the Humane Methods of Slaughter Act (HMSA; 7 U.S.C. 1901-1906). This act requires that all livestock (but not poultry) be rendered unconscious before slaughter. FSIS inspectors have the authority to stop slaughter lines and order plant employees to take corrective actions to ensure compliance with the act.

Concerns have persisted about FSIS enforcement of compliance with the HMSA regarding healthy, ambulatory animals. These concerns arose in early 2002 when media reports alleged widespread violations of the act, which prompted a number of administrative and congressional actions. In February 2002, FSIS placed 17 veterinarians in its district offices, specifically to monitor humane slaughter and handling procedures and to report to headquarters on compliance.

On January 31, 2004, GAO released a report to Congress stating that it had found it difficult to assess FSIS's performance on enforcing the act because of incomplete and inconsistent inspection records (GAO-04-247, *Humane Methods of Slaughter Act: USDA Has Addressed Some Problems but Still Faces Enforcement Challenges*). GAO also reported that inspectors' knowledge of regulatory requirements varied, documentation did not consistently reflect the scope and severity of incidents, and enforcement action varied depending upon whether it was one animal or several that had not been rendered completely unconscious by stunning.

FSIS issued new guidelines to its field personnel in November 2003, and indicated it would follow up on GAO's recommendations for improvement. On September 9, 2004, the agency published a *Federal Register* notice outlining a "systematic approach" to meeting humane slaughter requirements.

In Congress. Section 10305 of the Farm Security and Rural Investment Act of 2002 ((P.L. 107-19; the farm bill) expresses the sense of Congress that FSIS should fully enforce the HMSA and report the number of violations to Congress

annually. Subsequent annual appropriations measures for USDA have designated more staff and/or funding to improve such enforcement.

The January 2004 USDA regulatory ban on slaughtering downer cattle for human food was adopted in response to BSE concerns. However, some Members of Congress believe that a ban should be written into law to ensure humane treatment of all downer animals (not only cattle) at federally inspected slaughtering facilities and other locations. These Members could reintroduce bills in the 110th Congress to codify a downer ban.

On another matter, legislative proposals to include poultry under the humane slaughter act were introduced in the 102nd through 104th Congresses, but no action was taken. However, they also could reappear in the 110th Congress.

Horse Slaughter

Approximately 90,000 U.S. horses were slaughtered for human food in 2005, mainly for European and Asian consumers. Such slaughter is conducted under federal inspection at two foreign-owned plants in Texas and another foreign-owned plant in Illinois. Debate has focused on the acceptability of using horses for human food, and the costs of long-term care for such horses (or, disposing of their carcasses) if they no longer went for human food.

In Congress. The 109th Congress debated whether to ban horse slaughter and (in the FY2006 appropriation) banned the use of federal funds for ante-mortem inspection of horses at meat processing plants. Although supporters of the ban had hoped that the lack of federal funds for such inspection would force an end to horse slaughter, the practice continued, with the three plants paying user fees for the federal service.

Pending bills on this issue, which could be reintroduced in the 110th Congress, would prohibit commerce in horses and other equines to be slaughtered for human consumption.²³

Single Food Agency

U.S. food safety oversight, while concentrated in FSIS and FDA, is spread among 15 agencies operating under a variety of statutes. This complex system is supplemented by many state food safety programs. GAO, which has looked at the matter several times, noted in a recent report that the federal food safety system “emerged piecemeal, over many decades, typically in response to particular health threats or economic crises. The result is a fragmented legal and organizational structure that gives responsibility for specific food commodities to different agencies and provides them with significantly different authorities to enforce food safety

²³ See CRS Report RS21842, *Horse Slaughter Prevention Bills and Issues*, by Geoffrey S. Becker.

laws.”²⁴ Besides GAO, the National Academy of Sciences and the National Commission on the Public Service have studied the issue and recommended options for change.²⁵

In Congress. In the 109th Congress, companion bills were introduced that would have combined federal food safety programs, including meat and poultry inspection, under a new Food Safety Administration. If, as expected, such proposals are offered again to reorganize and/or consolidate the federal food safety structure, Congress likely would be faced with a range of policy questions. These include whether the current disparate regulatory approaches and their authorizing statutes remain appropriate, particularly given the diversity of food types, their different health risks, their methods of production, and their sources of supply; the continuously evolving science on foodborne illness and how to prevent it; and funding constraints, among other things.

Food Security and Emergency Preparedness

Since September 11, 2001, concern has been voiced about the potential for terrorist attacks on U.S. agriculture and the food supply through intentional contamination by organisms or chemicals injurious to crop, animal, or human health. FSIS’s Food Biosecurity Action Team (F-BAT) has conducted mock exercises to improve response time and communication in emergency situations. FSIS made security guidelines available to food processors in August 2002; it unveiled its new Food Emergency Response Network (FERN) Division on February 15, 2005 (accessible on the FSIS website). Also, USDA on April 14, 2005, announced the availability of model food security plans and training for meat and poultry plants to help strengthen security measures and prevent potential acts of intentional contamination. The Food Threat Preparedness Network (PrepNet) is a joint FSIS/FDA group that works on threat prevention and emergency response.

In Congress. Protecting the U.S. food supply from acts of terrorism or other intentional contamination has been among the many facets of the ongoing congressional debate on homeland security since September 2001. For example, Congress, through various appropriations measures, has provided FSIS new monies to conduct increased oversight of meat and poultry safety, some of which is described above. Bills also have been introduced to improve federal responsiveness to agroterrorism and to give added agricultural biosecurity responsibilities to the Department of Homeland Security. Another would have required USDA regulations for stronger measures to prevent both unintentional and intentional contamination of

²⁴ *Food Safety: Experiences of Seven Countries in Consolidating Their Food Safety Systems*, GAO-05-212, February 2005.

²⁵ See National Research Council, Institute of Medicine, *Ensuring Safe Food From Production to Consumption*, Washington, D.C., National Academy Press, 1998; and National Commission on the Public Service, *Urgent Business For America: Revitalizing the Federal Government For the 21st Century*, Washington, D.C., 2003.

meat and meat products, poultry and poultry products, and eggs and egg products in USDA-regulated establishments.²⁶

In a somewhat related matter, Congress in 2006 enacted legislation, the Animal Enterprise Terrorism Act (S. 3880; P.L. 109-374), providing new federal penalties for those who attempt to damage or interfere with businesses that produce animals and animal products. Its supporters view it as an additional law enforcement tool against so-called animal rights extremists.

²⁶ For more information and updates on FSIS and other federal funding for these activities, see CRS Report RL32521, *Agroterrorism: Threats and Preparedness*, by Jim Monke; also, the FSIS Food Security and Emergency Preparedness Website can be accessed at [http://www.fsis.usda.gov/Food_Defense_&_Emergency_Response/index.asp].