



STATE OF MICHIGAN
DEPARTMENT OF AGRICULTURE
LANSING

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DATE: March 13, 2009

TO: Honorable Cameron Brown, Chair
Senate Agriculture Appropriations Subcommittee

Honorable John Espinoza, Chair
House Agriculture Appropriations Subcommittee

FROM: Nancy Nyquist, Legislative Liaison

SUBJECT: Foodborne Illness and Emergency Response Report

Section 402 of PA 253 of 2008 requires the Michigan Department of Agriculture (MDA) to provide a report describing the Foodborne Outbreaks and Emergencies for the previous year. The Foodborne Illness and Emergency Response Report is attached for your review.

Please contact me at (517) 241-4381 if you have any questions or would like any additional information.

Attachments (17 pages)

cc: Senate Agriculture Appropriations Subcommittee
House Agriculture Appropriations Subcommittee
Jessica Runnels, Senate Fiscal Agency
William Hamilton, House Fiscal Agency
Jacques McNeely, State Budget Office
Shannon Pike, State Budget Office
Deliah Underwood, State Budget Office

Foodborne Illness and Emergency Response

2007-2008 Fiscal Year

**A Summary for the House and Senate Appropriations Subcommittees
on Agriculture and the House and Senate Fiscal Agencies**

**In conformance with
P.A. 253 of 2008
Sec. 402**

**Submitted by:
Michigan Department of Agriculture
Food and Dairy Division**

Executive Summary

The Michigan Department of Agriculture (MDA) continues to strengthen partnerships with local, state and federal agencies, academia and industry to ensure consistent investigations of identified foodborne illness outbreaks and food emergencies. In spite of improved collaboration, foodborne illnesses continue to be a significant cause of human illness in Michigan. Food protection efforts have traditionally focused on preventing unintentional contamination of food and agriculture; recent events highlight the need for increased focus on preventing deliberate contamination of the food supply.

This report contains information on Michigan food-related emergencies and food safety enforcement activity that occurred during the 2007-2008 fiscal year. These included:

- **172** reported potential foodborne illness outbreaks involving **1,453** persons,
- **114** Class I food recalls or recall expansions, and
- Over **2,000** enforcement actions taken to achieve compliance with food safety standards and applicable state laws.

The causative agent of a majority of the foodborne illness outbreaks reported during this time period was not identified – a finding consistent with national data published by the Centers for Disease Control and Prevention (CDC). This indicates the importance of active investigations that include laboratory analyses of clinical, environmental, and food specimens to identify how further foodborne illness outbreaks can be prevented. Norovirus was the leading cause of laboratory-confirmed probable foodborne illness outbreaks, accounting for 4 (15%) of 27 such outbreaks. Norovirus was also the top-cited confirmed etiology in all potential foodborne illness outbreaks reported, accounting for 9 (5%) of 172 potential outbreaks. Further, a large number of outbreaks with unknown etiologies are likely due to Norovirus; the CDC estimates at least 50% of all foodborne illness outbreaks can be attributed to Norovirus.

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I. Background

Single incidents of foodborne contamination can have devastating public health and economic consequences. Examples of such incidents in Michigan during fiscal year 2008 include:

- **July 2008 Multi-state E. coli O157:H7 outbreak associated with Ground Beef**
 - 49 confirmed cases in 7 states
 - 23 confirmed cases in MI
 - Most cases occurred in MI and OH
 - Suspect food: ground beef
 - Recall of ground beef products
 - Implicated product traced back to Midwest processor

- **June-August 2008 Multi-state *Salmonella* Saintpaul outbreak associated with tomatoes/peppers**
 - 1,442 confirmed cases, in 43 states, Canada and District of Columbia
 - 28 confirmed cases in MI
 - Suspect foods: tomatoes, peppers originating in Mexico
 - Several health alerts resulted

- **September- October 2008 Multi-state E. coli O157:H7 outbreak associated with iceberg lettuce**
 - 38 cases in MI
 - Common source: lettuce from a MI processor
 - No product laboratory confirmed
 - 2 large clusters in MI at university and county jail

- **September-October 2008 Melamine in Infant Formula**
 - FDA issued a Health Information Advisory in response to reports from China of infant formula contaminated with melamine.
 - Numerous other products potentially contaminated with melamine also resulted, including candy, cookies, beverages, etc.
 - MDA field staff conducted checks of stores where these products may potentially have been sold.

For additional examples from 2008 and previous years, please see the Appendix

Recognizing that a stable, safe and secure food supply is fundamental to our survival as a nation, the former President of the United States designated Food and Agriculture as critical infrastructures in February, 2003. The vulnerability of the food and agricultural infrastructure in the U.S. and worldwide, to accidental

and intentionally-introduced contaminants, is well known and documented. Since prevention may not always be possible, early detection, coupled with prompt response efforts are key to protecting the health of our citizens and rapidly restoring consumer confidence in government's ability to ensure a safe and secure food supply.

The Food and Dairy Division of the MDA inspects and regulates:

- Over **18,600** licensed food establishments including supermarkets, convenience stores and major food processing operations
- Over **3,900** dairy facilities including processing plants and dairy farms

Further, the Division, in partnership with the state's 45 local health departments, oversees regulation of Michigan's over **48,000** restaurants, cafeterias, temporary food vendors and commissaries.

The Division, in collaboration with its partners at the local, state and federal levels, conducts a comprehensive food safety program that includes:

- **Prevention** of foodborne illness through effective regulation,
- **Preparedness** for contamination incidents that are not prevented,
- **Response** to detected incidents, including investigation and control activities, and
- **Recovery** of critical functions to minimize human illness and adverse economic impact and rapidly restore consumer confidence.

II. Prevention

National estimates indicate that **76 million** people become ill from microorganisms in food resulting in as many **325,000** hospitalizations and **5,000** needless deaths every year. Many, if not most of these illnesses are thought to be preventable.

The CDC has identified five behaviors and practices as being key contributing factors of foodborne illness:

- Poor personal hygiene;
- Food from unsafe sources;
- Inadequate cooking;
- Improper holding temperatures, and
- Contaminated food equipment.

This fiscal year, the Division continued working with industry to promote active managerial control of food safety and reduce the major foodborne illness risk

factors, such as proper holding temperatures and personal hygiene. Activities in 2008 included:

- Development of a team of MDA food safety trainers who will train and conduct quality assurance reviews with inspection staff to increase the Division's focus on reducing the factors that cause foodborne illness.
- Establishment of regular training for standardized trainers at both MDA and local health, utilizing webinar technology.
- Completion of a mid-course survey to determine the occurrence of foodborne illness risk-factors in food establishments. The survey indicated progress in reducing the risk factors and showed that improper temperature control, poor personal hygiene and contaminated equipment are the areas that need the most focus by the food industry.

III. Preparedness

The MDA led a variety of activities during this time period to increase the capacity of both government and food industry managers to prepare for foodborne emergencies that are not prevented. Highlights of these activities include:

- **FDA Rapid Response Team Development Grant.** MDA received a grant of \$500,000 that will help fund additional emergency response resources and coordinate Michigan with national efforts.
- **Emergency Management Exercises.** MDA staff participated in exercises to help prepare staff in the event of a food-related emergency. For instance, in February 2008, the MDA's Sampling Team conducted a cross-divisional exercise featuring a contaminated livestock feed scenario. Several hundred samples were collected during this three-day exercise.

IV. Response

a. Investigation and Control of Reported Foodborne Illness Outbreaks

The magnitude of foodborne illness nationwide has been chronically underestimated. The CDC estimates only 5% of all foodborne disease is reported to health authorities.

Local health departments are required by Michigan law to investigate outbreaks of human illness. The Food and Dairy Division collaborates with local health departments by:

1. conducting investigations in facilities that the Division regulates directly,

2. providing technical assistance to outbreak investigators (both MDA and local health department staff),
3. conducting tracebacks through the food chain to determine the source of implicated food from manufactured sources, and
4. overseeing and verifying that consumers have been notified and food products have been recalled by the manufacturer.

For disease control and surveillance purposes, the Michigan Food Law of 2000 (Act 92, P.A. 2000) requires local health departments to provide MDA with a final report of findings from each foodborne illness investigation.

Between October 1, 2007 and September 30, 2008 the following outbreak information was reported to MDA:

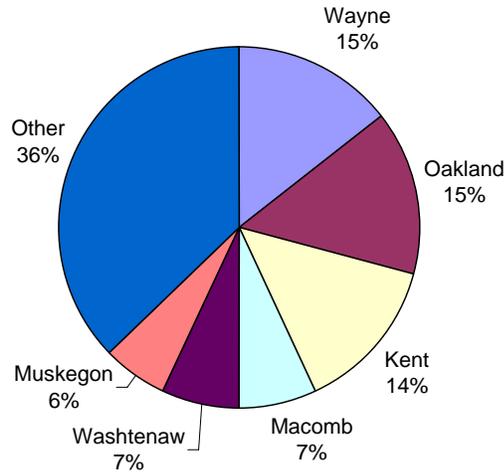
- A total of **172 potential foodborne illness outbreaks**¹, involving 1,453 illnesses.
- Of the 172 potential outbreaks, **27** were deemed as **probable foodborne illness outbreaks** after investigation.
- In 12% of reported potential foodborne illness outbreaks, a causative agent was identified.
- Approximately 63% of potential foodborne illness outbreaks were reported by six of the largest local health departments².

¹As defined in the Michigan Food Law of 2000 (Sect. 3103): An incident where two or more persons, *not of the same household*, have ingested a common food and have a similar disease, similar symptoms, or excrete the same pathogens, and there is a time, place, or person association between these persons; where there is a single case of suspected botulism, mushroom poisoning, paralytic shellfish poisoning, or other rare disease; or where there is a case of a disease or poisoning that can be definitely related to the ingestion of food.

²These are large population centers, and increased reporting likely reflects concomitant investigation and surveillance efforts. No conclusions can be made regarding relative risk of illness in different jurisdictions.

Foodborne Illness Outbreaks by Local Health Department

N= 172



- The 27 probable foodborne illness outbreaks accounted for 526 (36%) of all reported illnesses.
- The median size of probable foodborne illness outbreaks is 14 persons.
- Gastrointestinal infections are not limited to foodborne transmission; they can be transmitted by:
 - person-to-person contact
 - contact through infected animals
 - contact with contaminated surfaces
 - through contaminated water

In smaller incidents, non-foodborne transmission often cannot be discounted.

Highlights of Outbreak Investigations:

Multi-state outbreak of *Salmonella* Saintpaul associated with fresh produce

Staff participated in the investigation of an outbreak of *Salmonella* Saintpaul which involved 1,442 lab-confirmed cases of illness across 43 states, the District of Columbia, and Canada. Twenty-eight cases were seen in Michigan. Illness was first associated with tomato consumption and later jalapeno/serrano pepper consumption. MDA staff assisted with traceback on known cases, as well as FDA surveillance inspections and sampling of tomatoes, peppers and cilantro at various facilities. The MDA lab conducted analyses of samples collected.

Outbreak of E. coli O157:H7 affect university students and jail inmates

In early September, a cluster of ill inmates at a local county jail and students at a local university were found to be epidemiologically linked to consumption of lettuce. MDA staff worked many hours with the Michigan Department of Community Health, State authorities, local health departments, university staff and industry to investigate and trace product back to a Michigan produce processor. Eventually, the outbreak resulted in 38 illnesses, with additional illnesses seen in a neighboring state and Canada. No contamination was ever found in the plant or at the produce farms in California.

b. Food Recalls

During this time period, MDA shared information with stakeholders regarding 114 **Class I recalls and recall expansions** involving food products distributed in Michigan. This represents an 18% increase in the number of Class I recalls from FY 07. Additionally, MDA staff spent 3,700 hours performing approximately 550 recall audit checks.

Recalls are the voluntary removal of distributed food products from commerce by a firm when there is reason to believe that such products are adulterated or misbranded. The Food and Dairy Division obtains information about food product recalls from a variety of sources including: Federal agencies, affected companies, news media, and other sources.

Class I recalls involve a health hazard situation where there is a reasonable probability that the use of the product will cause serious, adverse health consequences or death. The Division disseminates information regarding Class I recalled products with Michigan distribution via the following methods:

- MDA website
- Email distribution to Division field staff who check recall effectiveness during routine inspections
- Email distribution to local health staff when a recall affects schools
- MDA text alerts (a new service that became available to the public in 2008)

Recall/Traceback Highlights:

Canned vegetables contaminated with *Clostridium Botulinum*

A random review by federal investigators at a Michigan canned produce plant showed potential problems with under-processing. Suspect product was sampled and *Clostridium Botulinum* spores were present in some cans. A total of three recalls of various lots and products were issued nationwide.

Illnesses due to E. coli O157:H7 lead to a Multi-State Beef Recall

A multi-state outbreak of E. coli O157:H7 occurred, with approximately 23 Michigan residents becoming ill between May 31 and June 8, 2008. Illness was

associated with consumption of ground beef purchased at a grocery store chain. MDA staff worked closely with USDA, state authorities and industry in conducting traceback of implicated product and recall audit checks. The traceback of this implicated meat resulted in a recall of 531,707 pounds of product from a large processor in the Midwest.

c. Enforcement Actions

Enforcement actions become necessary when food establishments fail to address food safety violations. Food and Dairy Division staff conducted nearly 2,000 enforcement actions during this time period:

Food Enforcement Activity

Enforcement Letters	269
Compliance Reviews	28
Consent Agreements/Admin Fines	153/\$55,344
Prosecution/Fines	2/\$13,234
Seizures	779
Dollar Amount of Seized Product	\$13,136,340
Informal Hearing	2
Reinspection/Fees	118/\$7,080

Dairy Enforcement Activity

Enforcement letters	515
Informal Hearing/Compliance Reviews	17
Administrative Fines collected by MDA	\$12,250
Prosecutions	0
Seizures	2
Dollar amount of seized products	\$217,985
Total Permit Suspensions	144
Total Pounds of Contaminated Milk Disposal	2,049,355 (\$386,303)

V. Recovery

When food-related emergencies occur, staff from the MDA and local health departments is responsible for determining if food establishment operators are taking necessary action and when it is appropriate for them to resume normal operations. Inspection, information sharing, and enforcement action as appropriate are typical activities used to ensure the safety of foods being offered to Michigan citizens following a food contamination incident.

VI. Conclusions

- In spite of improved collaboration, foodborne illnesses continue to be a significant cause of human illness in Michigan. Providing food safety information to food regulators, food industry managers, food workers, and the general public plays a key role in reducing foodborne illness.
- Food protection efforts have traditionally focused on preventing unintentional contamination to food and agriculture; recent events highlight the need for increased focus on preventing deliberate contamination of the food supply. The MDA is collaborating closely with federal, state and local agencies, and with academia and industry, to strengthen security of Michigan food and agriculture.
- The MDA continues to strengthen partnerships with local, state and federal agencies, academia and industry to ensure consistent investigation, notification and follow up of identified foodborne illness outbreaks and food emergencies.
- The fact that causative agents are not identified in a majority of Michigan's reported foodborne illness outbreaks is consistent with national data published by CDC. This indicates the importance of active investigations that include laboratory analysis of clinical, environmental, and food specimens to identify how further foodborne illness outbreaks can be prevented.

APPENDIX

Foodborne and Agricultural Incidents Illustrating Human and Economic Impact

Incidents listed below that involved Michigan are underlined.

Incidents

- **1973-74 Accidental Contamination of Animal Feed with PBB, Michigan**
 - 30,000 cattle, 4,500 hogs, and 1.5 million chickens slaughtered at cost of \$215 million (\$708 million in 2001 dollars).
 - Environmental and human health effects and costs largely unknown.
 - Citizen confidence in government shaken
- **1985 Intentional Salad Bar Contamination with Salmonella, Oregon**
 - Religious sect followers contaminate salad bars in 10 facilities hoping to disrupt local elections.
 - 750 people sickened with 45 hospitalized
 - Criminal intent in this case not recognized for months
- **1990s Bovine Spongiform Encephalopathy (BSE) Outbreak, Great Britain**
 - Prions evaded traditional control measures and contaminated feed
 - Human deaths linked with beef consumption shook consumer confidence in government
 - Estimated \$9 -14 billion compensation to cattle farmers and unemployed laborers
 - \$2.4 billion in loss of export markets
- **1994 *Salmonella* Enteritidis Ice Cream Outbreak, United States**
 - Estimated 224,000 ill persons in 41 states
 - Cross-contamination of a key ingredient occurred during transportation

Note: Another example of a massive outbreak linked to a dairy product occurred in 1985 when *Salmonella* Typhimurium contaminated pasteurized milk: sickened 170,000 people

- **1996 *E. coli* 0157:H7 Fresh Juice Outbreak, United States**
 - One of three outbreaks linked to fresh juice or cider that year
 - 66 ill persons identified, one 16 month old child died
 - Company paid a \$1.5 million fine.

- Michigan researchers, regulators, and agricultural leaders developed more stringent cider production guidelines to protect consumers
- **1996 Misidentification of Source in Cyclospora Outbreak, Texas**
 - Local health department incorrectly name CA strawberries as culprit in foodborne outbreak (source later shown to be Guatemalan raspberries)
 - \$40 million in lost sales for CA strawberry growers as consumer perception became reality
- **1997 Hepatitis A Outbreak, Michigan**
 - Outbreak began in school children and spread to the community.
 - Frozen strawberries later found to have come from Mexican source
 - Approximately 329 cases occurred over a year
 - \$389,000 in unbudgeted response costs plunged local government into extreme financial difficulties
- **1997 E. coli 0157:H7 Ground Meat Outbreak, Colorado**
 - Laboratory genetic fingerprinting techniques allowed detection of a widespread outbreak in the early stages confirming link between 15 ill persons and consumption of contaminated ground meat
 - 25 million pounds of ground meat from a single plant recalled
 - The production facility was closed during the outbreak and sold by the parent company to a competitor at deeply discounted prices.
 - The parent company was itself taken over by another competitor within a year.
- **1998 Listeria Monocytogenes Processed Meat Outbreak, United States**
 - Improved laboratory capabilities linked isolated cases occurring in 14 states - sometimes several months after illnesses occurred
 - Michigan and national news media sharply criticize state and federal agencies for not detecting the outbreak quicker.
 - Over 100 illnesses and 21 deaths (largely elderly persons and unborn/newborn children) linked with consumption of contaminated hot dogs and processed meats
 - Michigan production facility implicated (Sara Lee owned Bil Mar Foods in Zeeland)
 - 35 million pounds recall cost Sara Lee an estimated \$76 million
 - 241 employees (19% of facility workforce) laid off following the outbreak
- **1999 E. coli 0157:H7 Outbreak at a County Fair, New York**
 - Poorly constructed well on Washington County Fairground likely contaminated by manure run off
 - Estimated 2,800 to 5,000 fair attendees ill, 71 hospitalized, 14 developed Hemolytic Uremic Syndrome (HUS), 2 deaths.

- Similar outbreaks have occurred in Ohio, Wisconsin, Oregon, Ontario
 - A petting zoo was linked to a 2004 E. coli outbreak at North Carolina State Fair that sickened 108 people, including 15 children who developed life-threatening kidney ailments
- **2002-3 Intentional Contamination of Hamburger with Nicotine, Michigan**
 - Disgruntled meat market worker contaminated product while grinding meat unsupervised
 - Potentially lethal doses of nicotine-containing pesticide identified
 - 124 persons sickened
 - Need for better coordination of industry, public health, agriculture, and law enforcement investigations was clearly identified.
- **2003 Hepatitis A Outbreak, Pennsylvania**
 - 660 confirmed cases identified - some requiring liver transplants- and 4 deaths
 - 9000 persons given immune globulin to prevent disease
 - Contaminated green onions implicated as the source
 - Restaurant chain (Chi Chi's) had filed for Chapter 11 bankruptcy protection shortly before the outbreak and was sold to a competitor (Outback Steakhouse)
- **2004 Salmonella Outbreak and Recall of Almond - National**
 - Over 30 confirmed cases in a multi-state outbreak of Salmonella Enteritidis associated with consumption of contaminated raw California almonds, including several cases in MI.
 - Over 13 million pounds of almonds were distributed in the US and a number of other countries under a variety of names and in many different products.
 - MDA staff audited approximately 110 Michigan food establishments that received the almonds to verify that recalls were effective.
- **2005 Wendy's Finger Hoax**
 - After a woman announced she found a finger in a bowl of chili at a California Wendy's location, sales dropped nationwide, and as much as 70% in the surrounding area. Wendy's claimed losses of \$2.5 million in its felony complaint.
- **2005 Orange Juice Outbreak and Recall due to Salmonella - national**
 - Over 152 confirmed cases of Salmonella Typhimurium in 23 states, associated with "fresh-squeezed" unpasteurized orange juice from Florida processor
 - Product sold under variety of labels
 - MI had over 20 confirmed cases
 - MDA staff among the first in the nation to identify manufacturer

- **2006 Norovirus Outbreak at restaurant in Eaton County, MI – January**
 - 495 cases associated with dining at a full-service restaurant, including 17 employees.
 - No deaths were associated with this outbreak
 - Believed to have been caused by ill food worker vomiting in the kitchen during business hours

- **2006 Norovirus Outbreak at restaurant in Eaton County, MI – April**
 - 105 probable cases from seven MI counties associated with consumption of food from fast food restaurant, with no deaths
 - Believed to have been caused by ill food workers

- **2006 Norovirus Outbreak at restaurant in Ingham County, MI – May**
 - Over 460 cases identified with this outbreak from a restaurant in Lansing
 - Believed to have been caused by an ill food worker

- **2006 E. coli O157:H7 in fresh spinach-National**
 - 205 lab-confirmed cases of E. coli O157:H7 in 26 states associated with consumption of fresh spinach, including 5 MI cases
 - 104 cases were hospitalized with
 - 4 deaths resulting
 - Product sold by numerous distributors under variety of names
 - MDA staff completed over 500 recall effectiveness checks of food facilities

- **2006 Norovirus Outbreak at restaurant in Eaton County, MI- November**
 - 318 cases, including 22 employees, associated with dining or working at a full-service chain restaurant
 - Restaurant voluntarily closed twice for thorough disinfection of the restaurant
 - Believed to have been caused by ill food workers

- **2006 E. coli O157:H7 outbreak associated with lettuce served in national fast food franchise, NE US- Nov-Dec**
 - 71 lab confirmed cases of E. coli O157:H7 in five states, associated with lettuce consumption at a national fast-food franchise in November and December of 2006.
 - 53 hospitalized, and 8 with kidney failure
 - No cases found in MI

- **2006-2007 *Salmonella* Tennessee outbreak and recall related to peanut butter-national- Feb-Mar**
 - Approximately 628 confirmed cases of *Salmonella* Tennessee across 47 states, associated with consumption of major national brand of peanut butter manufactured in Georgia
 - MI has sixteen confirmed cases
 - MDA staff is working with Federal investigators to conduct 1,033 on-site audit checks

- **2007 Botulism linked to canned foods, Nationwide- July**
 - 8 cases from Indiana, Texas and Ohio
 - Outbreak traced to canned goods and led to recall of nearly 90 different products sold under 26 different brand names
 - MDA food inspectors conducted 1,033 on-site audit checks across the state, to ensure recalled product was off store shelves

- **2007 Melamine Contamination in Pet Food- recall**
 - March 15 FDA determines pet illness and deaths associated with Chinese wheat gluten and other ingredients contaminated with melamine. Initiated nationwide recall of multiple brands.
 - Contaminated pet food entered animal feed, raised questions on human health effects from consumption of these livestock
 - MDA staff performed recall effectiveness checks of pet food sold at retail.
 - FDA initiated a protein surveillance project with states to sample human food ingredients and products prepared with Chinese gluten and proteins
 - Two sites sampled in MI by MDA and FDA staff
 - No contamination found in human foods at this time

- **2007 E. coli in beef trim-nationwide**
 - Minnesota E. coli illness outbreak associated with beef trim products from MN processor
 - Beef trim sent to MI for processing into ground beef, exported back to MN
 - Finished ground beef from processors out of state found in MI
 - MDA working with USDA to identify distribution

- **2007 E. coli in beef products –MI processor**
 - 16 confirmed cases nationwide
 - 2 MI cases identified
 - 140+ MDA and Local Health Department recall audit checks conducted

- MI cases of E. coli O157 linked to multi-state outbreak
 - MI cases associated with consumption of ground steak-burger from national food service distribution and retail operation
 - Product manufactured at MI processor
 - National recall of beef product
 - MDA working with LHD and USDA staff to conduct recall effectiveness checks.
- **2007 Botulism linked to canned foods, Nationwide- July**
 - Multi-state C. botulinum (botulism)
 - 8 confirmed cases in Indiana, Texas and Ohio
 - No MI cases identified
 - Suspect food: Canned chili, hot dog sauce, etc.
 - Nationwide recall of 90+ different products under dozens of name brands
 - MDA staff conducted 1000+ recall audit checks
- **2007 Multi-state E.coli O157:H7 outbreak linked to ground beef patties**
 - 40 confirmed cases as of 10/26/2007
 - No MI cases identified
 - Nationwide recall of 21.7 million pounds
 - Company went out of business
- **2007 Multi-state Salmonella outbreak linked to frozen pot pies**
 - 272 confirmed cases in 35 states
 - 3 cases in MI
 - Suspect food: undercooked frozen pot pies
 - Nationwide recall of products
- **April-May 2008 Multi-state Salmonella Agona outbreak associated with breakfast cereal**
 - 28 confirmed cases in 15 states
 - 1 confirmed case in MI
 - Suspect food: Unsweetened Puffed Rice and Puffed Wheat cereals
 - Nationwide recall
- **July 2008 Multi-state E. coli O157:H7 outbreak associated with Ground Beef**
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 - Suspect food: ground beef
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