FSIS Releases Study on Potential Relationship Between Particular Poultry Processing Interventions and Formation of Semicarbazide

Today, FSIS released the results of an analysis of semicarbazide (SEM) residues in U.S. poultry products. SEM is used as a marker for use of nitrofurazone, an antibiotic banned for use in food animals by the Food and Drug Administration (FDA) since 2002. Investigations indicate that processing interventions could have some role in SEM formation unrelated to banned drug use. FSIS is working to better understand this process.

FSIS performs routine monitoring, under the U.S. National Residue Program, to ensure that meat, poultry and egg products are free from illegal and/or harmful residues, such as nitro furans.

FSIS conducted its study by collecting samples from three points in the poultry production process. Samples collected included eviscerated carcasses prior to chilling ("pre-intervention"), eviscerated carcasses after chilling and antimicrobial intervention steps ("post-intervention"), and frozen raw parts. No samples collected at the pre-intervention tested positive for SEM, whereas SEM was detected in the majority of samples of post-intervention carcass and frozen raw parts.

The absence of SEM in pre-intervention samples suggest that the detection of SEM in the products sampled post-intervention may be a result of by-products formed during food processing, and not an indication of illegal nitrofurazone use.

FSIS performed an assessment and determined that there are negligible public health concerns from SEM at levels observed in the food products tested. Subsequently, FSIS is currently assessing its sampling procedures to monitor raw poultry samples for the presence of SEM.

The study is available on the FSIS website at: *https://www.fsis.usda.gov/wps/portal/fsis/topics/data-collection-and-reports/chemistry/Residue-Chemistry.*

Release of a New Report on the Sources of Foodborne Illnesses for 2016 from IFSAC

Today, the Interagency Food Safety Analytics Collaboration (IFSAC) released a report titled "Foodborne illness source attribution estimates for 2016 for *Salmonella*, *Escherichia coli O157*, *Listeria monocytogenes*, and *Campylobacter* using multi-year outbreak surveillance data, United States." The authors used outbreak data to produce new estimates for foods responsible for foodborne illnesses caused by four pathogens in 2016. The Centers for Disease Control and Prevention (CDC) estimates that, together, these four pathogens cause 1.9 million foodborne illnesses in the United States each year.

The analysis uses a method developed by IFSAC to estimate foodborne illness source attribution, which is the process of estimating the degree to which specific foods and food categories are responsible for foodborne illnesses. In addition to the 2016 estimates, IFSAC posted estimates for 2014 and 2015 on its website, reflecting IFSAC's goal to provide annual updates of these estimates using data from the most recently available outbreak data.

For the 2016 report, IFSAC analyzed data from just over 1,000 foodborne disease outbreaks that occurred from 1998 through 2016 to assess which categories of foods were most responsible for *Salmonella*, *E. coli* O157, *Listeria monocytogenes*, and *Campylobacter* infections. The pathogens were chosen because of the frequency or severity of the illnesses they cause, and because targeted interventions can have a major impact in reducing them. The implicated foods were divided into 17 categories for the analysis, and the method gives the greatest weight to the most recent five years of outbreak data (2012–2016). Of note in the 2016 report:

- *Salmonella* illnesses came from a wide variety of foods.
- *E. coli* O157 illnesses were most often linked to vegetable row crops (such as leafy greens) and beef.
- *Listeria monocytogenes* illnesses were most often linked to dairy products and fruits.
    - o Dairy and fruits remain the top two categories with the highest estimated attribution percentages, but the difference between the two categories is not statistically significant.
    - o There was an increase in the estimated attribution of *Listeria* illnesses to vegetable row crops from 3.4% in 2013 to 12.5 % in 2016 due to the impact of a large multi-state outbreak in 2015 linked to prepackaged lettuce.
- *Campylobacter* illnesses were most often linked to chicken after removing dairy outbreaks from the estimates.
    - o Most foodborne *Campylobacter* outbreaks were associated with unpasteurized milk, which is not widely consumed, and those outbreaks likely over-represent dairy as a source of *Campylobacter* illness.
    - o For 2016, chicken had a significantly higher estimated attribution percentage than the other non-dairy food categories. The adjusted chicken percentage increased from 9.5% to 30.3% after removing dairy.

FSIS Constituent Update is prepared by the Congressional and Public Affairs Staff, Office of Public Affairs and Consumer Education

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Export Requirements Updates

The Library of Export Requirements has been updated for the following countries:

Costa Rica
Honduras
Hong Kong
Jamaica
Japan
Nicaragua
Morocco
New Caledonia
Republic of Kiribati
Republic of Korea
South Africa
Singapore

For a complete list of countries, visit *https://www.fsis.usda.gov/wps/portal/fsis/topics/international-affairs/exporting-products.*

... Release of a New Report

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The updated estimates combined with other data might help shape agency priorities and support the development of regulations and performance standards and measures, among other activities. As more data become available and methods evolve, attribution estimates may improve. Updates to these estimates will enhance IFSAC's efforts to inform and engage stakeholders, and further their ability to assess whether prevention measures are working.

IFSAC was created in 2011 by three federal agencies—CDC, the U.S. Food and Drug Administration (FDA), and the U.S. Department of Agriculture's Food Safety and Inspection Service (USDA FSIS)—to improve coordination of federal food safety analytic efforts and address cross-cutting priorities for food safety data collection, analysis, and use. For more information on IFSAC projects, visit: *https://www.cdc.gov/foodsafety/ifsac/projects/index.html* or email IFSAC@fda.hhs.gov.

FSIS Issues Directive on Sharing Information with Public Health Partners

FSIS has issued a Directive to describe the process the Office of Public Health Science uses to share information with state or local agencies, foreign government officials, and international organizations. Information about FSIS-regulated products relevant to foodborne illness investigations may be shared through this process. To view the directive, please visit: *https://www.fsis.usda.gov/wps/wcm/connect/9865dcdf-068c-4e2f-891f-ef93b879e831/2620.5.pdf?MOD=AJPERES.*

Policy Updates

FSIS notices and directives on public health and regulatory issues are available at: *https://www.fsis.usda.gov/wps/portal/fsis/topics/regulations.* The following policy updates were recently issued:

Notice 60-18 - *Update to the Sampling Instructions for the Fiscal Year 2018 Dioxin Survey*

Directive 5000.7 - Verification of Adequate Controls at Establishments in Areas Affected by Natural Disasters

Directive 5500.2 Rev. 7 - *Significant Incident Response*

Docket No. FSIS-2018-0047 - National Advisory Committee on Meat and Poultry Inspection Committee Renewal