



A report summary from the Economic Research Service

Signaling Food Safety: Pathogen Rates of Raw Poultry With Food Safety Certifications

Kar Lim, Yuqing Zheng, and Michael Ollinger



Key Points

- Retailers and other stakeholders are increasingly relying on Global Food Safety Initiative (GFSI)-recognized certifications to facilitate food safety risk management. More than half of the poultry processing establishments in the United States are certified in 2023–24.
- This report compares *Salmonella* and *Campylobacter* detection rates between samples of certified and uncertified raw poultry products collected from 592 U.S. establishments.
- Certified poultry products are associated with significantly lower *Salmonella* detection rates.
- Certified products are not associated with consistently lower detection rates in *Campylobacter*.
- Differences across individual certification programs suggest that pathogen-specific outcomes may depend on the specific certification system.

Why Does This Matter?

The Global Food Safety Initiative (GFSI) has emerged as a leading private sector-led framework, which harmonizes private sector food safety standards across different certifiers. GFSI provides standards against which certification programs can be benchmarked. This function facilitates adherence to recognized food safety practices by food certifiers and food producers. Benchmarking promotes mutual recognition among different certifications, reducing the need for redundant or duplicate certifications.

Food producers and retailers rely on the certifications to signal adherence to food safety practices. However, little is known on whether the adherence to these certification programs results in a reduction of pathogens in raw poultry products. This report analyzes the relationship between GFSI-recognized certifications and pathogen detection rates in raw poultry products, focusing on three prominent certifications: Safe Quality Food (SQF), Brand Reputation through Compliance Global Standard (BRCGS), and Food Safety System Certification 22000 (FSSC 22000).

Understanding the impact of these certifications is valuable for public health and market efficiency. The cost of foodborne illnesses attributable to poultry is substantial in the United States. In addition, GFSI-recognized certifications also play a role in facilitating market access, standardizing food safety management systems, and enhancing consumer confidence. Such benefits to public health and market efficiency provide a basis for evaluating the role and value of these certifications.

We empirically assess whether products from establishments holding GFSI-recognized certifications exhibit different rates of *Salmonella* and *Campylobacter* detection compared to non-certified establishments. Findings from this analysis can inform policy discussions about the role and effectiveness of certification programs in safeguarding public health and guide resource allocation for industry stakeholders, policy-makers, and consumer advocacy groups.

A Few More Details

This study combined data on pathogen testing results in raw poultry products from the USDA's Food Safety Inspection Service (FSIS) with certification status from certifiers, creating a unique dataset. The testing data encompassed 13,837 *Salmonella* and 7,519 *Campylobacter* tests, collected from 592 establishments between October 2023 and March 2024.

The primary outcome measure was the positive detection rate of *Salmonella* or *Campylobacter*. To assess the impact of certification on pathogen detection, the study employed the bivariate probit model. The model makes use of the fact that *Salmonella* and *Campylobacter* detection tests are often conducted in tandem on individual samples. Separate probit models were also estimated for each pathogen. Lastly, we explored how the association might change according to the size of the establishments and the types of products.

ERS is a primary source of economic research and analysis from the U.S. Department of Agriculture, providing timely information on economic and policy issues related to agriculture, food, the environment, and rural America.