

Scholarship Applications Now Open!

The Meat Foundation is now accepting undergraduate and graduate scholarship applications for the 2025-2026 academic year! The Meat Foundation will be awarding one \$10,000 Barry Carpenter Scholarship, along with several \$5,000 scholarships. These scholarships are merit-based and open to all undergraduate and graduate students enrolled at an accredited university who are majoring in Animal, Meat, Poultry, or Food Sciences, enrolled in a Culinary Arts program, or are interested in pursuing a career in the meat industry. Applications require department support, and a transcript must be uploaded at the time of application. Please review the [undergraduate](#) and [graduate](#) eligibility and rules before you begin the application form.

The Meat Foundation Scholarship application deadline is May 30, 2025.

Retail and Meat Industry Celebrates 20th Anniversary of Power of Meat.

The Power of Meat, presented at this year's Annual Meat Conference in Orlando, celebrated a 20-year milestone revealing meat's strong household penetration and its role in a healthy diet. The number of Americans who describe themselves as meat eaters (81%) and the number of households that purchase meat (98%) remain steady from 2024. Seventy-three percent of Americans believe meat is an overall healthy choice. Getting enough protein is very/somewhat important to 90% of Americans with eggs, chicken and beef topping the list of foods that consumers view as protein rich.

The Power of Meat study was conducted by 210 Analytics on behalf of FMI—The Food Industry Association and the Meat Foundation. The analysis was made financially possible by Cryovac/Sealed Air.

Click the links below to expand & download the PoM Infographic and Top 10 Takeaways

[Power of Meat 2025 infographic](#)

[The Top 10 Findings of the Power of Meat 2025](#)

Power of Meat 2025
Celebrating 20 years of insights into meat shopping

- 98% of American households purchase meat*
- 81% of Americans consider themselves meat eaters*
- 73% of Americans believe meat is an overall healthy choice

Eggs, chicken and beef top the list of foods that consumers view as protein-rich

The average American shops for meat 54 times per year** and spends \$16.12 on meat per trip

Top three purchases**

- Refrigerated meat
- Prepared meat
- Beef
- Chicken
- Pork
- Lunchmeat
- Bacon
- Sausage

Getting enough protein is very/somewhat important to 90% of Americans

Other priorities include preparing central meals, buying quick prep options, and getting creative with ingredients

How Americans most often prepare meals

- Americans prepare 4.8 dinners per week at home - 90% (4.2) include meat
- 53% using a mix of from-scratch and prepared food
- 37% completely from scratch
- 9% using only prepared food

What Americans say about meals at and away from home

- 30% ate out less than last year
- 87% are interested in recipes and tips to help create restaurant-style meals at home
- 86% say it's very/somewhat important to save time on meal prep during the week

Beyond price, many factors shape shoppers choices - for example, 56% try to do their part for the environment

The 20th Annual Power of Meat study was conducted by 210 Analytics on behalf of FMI - The Food Industry Association and the Meat Foundation. For more information, visit [www.MeatFoundation.org](#) or [meatfoundation.org](#)

THE POWER OF MEAT 2025

20th ANNUAL MEAT CONFERENCE

A healthy meat department performance led to new sales trends in 2024. Meat was the MVP of the fresh perimeter in 2024, with a record \$100 billion in sales. 98.2% household penetration and 54 trips per year. Dollar sales grew 4.7% and pounds 2.3% year-over-year, with a lead role for beef. Ground beef was the number one in-store sales growth out of 65,000 center-store and packaged subcategories (Circina M&D).

Today's meat lineup is heavily influenced by the external marketplace, with the meat department offering value. 84% of consumers are concerned over today's cost of living, leading to more focus on price and promotions, but always hand-in-hand with taste and quality. More meat planning, more trips and larger packages compensated for an increase in home-prepared dinners with meat. Both value and premium cuts/finishes grew as consumers sought to replace restaurant occasions.

Beef and pork are the department's bread and butter, but the top 10 sellers reflected 56% of unit sales in 2024. Purchasing a greater variety of cuts and looks like they're to more home-prepared meals with meat/poultry — understanding the importance of innovation, lowering trial barriers and growing confidence in selecting and preparing new cuts/dishes.

Taste: the ultimate driver of buying the same quantities of meat/poultry again.

58% of consumers have tried-and-true meat/poultry favorites that would be interested in exploring more. The favorites are beef and pork cooking confidence beyond the basics. Top areas of interest for new recipe include comfort meals, quick preparation options and creative ways to cook with basic ingredients, such as chicken and ground beef. Younger shoppers are more interested in spicing, indulgent and global recipes.

84% of consumers can be persuaded to spend a little more on meat and poultry when the time is right. A hot sales promotion and holidays are the top reasons to spend a little more on meat/poultry — emphasizing the opportunity in leaving the primary, secondary and self-oriented holidays. A cut or kind of meat/poultry consumers deem healthier, a preferred pack size or brand and convenience can also prompt them to splurge.

Time-saving shortcuts are becoming standard fare, but go beyond value-added meat/poultry. Bakery-bred and more 50% of consumers describe their typical meat preparation as a mix of items cooked from scratch and semi- and fully-prepared items. Consumers seek convenience in meal planning, shopping and preparation — increasingly recognizing value-added, pre-cooked and frozen meat and poultry solutions into their meal plans.

More than 1 in 10 consumers believe meat and poultry are nutrient powerhouses and an overall healthy choice. Eating meat is the norm. The nation's eye is on protein, with 90% believing it's important to consume ample protein daily, with 35% tracking their intake. Better consumer understanding of the benefits of high-quality protein along with a focus on other key nutrients in meat/poultry could further strengthen nutrition's positive role in meat/poultry purchases.

Consumers increasingly seek transparency into animal-raising and processing standards.

Half of consumers feel positive about animal-raising practices in the U.S. and four in 10 trust that their grocery stores sell humanely-raised meat. Others are unclear or have doubts. A focus on animal welfare and/or environmental sustainability most commonly leads to purchasing meat/poultry with specific claims, such as humanely-raised, grass-fed and organic, which experienced strong sales growth in 2024.

The measurement share of meat solutions continues to decline, made 181F remains gained share.

Traditional grocery's share of meat sales dropped from 52.8% in 2019 to 46.3% in 2024 — a shift of several billion dollars (Circina, all outlets). Driven by strong Millennial engagement, supermarkets, club and online general share over the past 10 years. Consumers increasingly regard one needs meat as good or even better than meat and poultry that is cut in store, but do seek portion size variety — both small and bulk packages, and packaging benefits such as extended shelf life.

181F Millennial's representing 21% of all new sales in 2024. The meat case is the bottom category.

In addition to adjusting the current marketplace trends focused on value, longer-term demographic shifts point to an opportunity to re-engage Millennials, marketing and merchandising to meet the growing Millennial desire to make sales. Millennial's approach to meat and poultry is vastly different than that of Boomers, including the what, where and why. This points to growing use of health benefits, convenience and sustainability as the factors driving the meat/poultry purchase are changing along with meat favorites, preparation decisions, cook time and inspiration.

Report made possible by
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Consumer Food Safety Education Conference

The Beef Checkoff, through its contract with the Foundation, sponsored the partnership for Food Safety Education's Consumer Food Safety Conference on March 13-14, 2025 in Houston, TX. The conference was attended by 150 food safety educators and communicators; public health and environmental health professionals; cooperative extension specialists; registered dietitians and nutrition professionals; among others. As a sponsor, the Beef Checkoff was provided an opportunity to share post-harvest beef safety research conducted on behalf of the Beef Checkoff and engage with attendees directly.



New CDC Data on Foodborne Illnesses: Foodborne Illness Acquired in the United States—Major Pathogens, 2019

The CDC's *Emerging Infectious Diseases* journal published updated figures from various sources regarding annual foodborne illness in the U.S. In 2019, seven key pathogens caused approximately 9.9 million illnesses, 53,300 hospitalizations, and 931 deaths.

Major Findings:

- **Norovirus** was the most common cause, linked to over 5.5 million illnesses and 22,400 hospitalizations.
- ***Campylobacter spp.*** caused almost 1.9 million illnesses and 13,000 hospitalizations.
- **Nontyphoidal *Salmonella*** led to almost 1.3 million illnesses, 12,500 hospitalizations, and the highest death toll (238 deaths).

These estimates account for underreporting and underdiagnosis, reflecting improved surveillance methods including expanded use of culture-independent diagnostic tests. This report reinforces the need for robust food safety controls targeting high-burden pathogens like *Campylobacter* and *Salmonella*. The findings support continued investment in research as well as pathogen detection, sanitation, and traceback systems to protect public health and industry integrity.

[The article is available here.](#)

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Research. Education. Scholarship.

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Protein PACT

Animal Care & Handling Conference
WESTIN DENVER DOWNTOWN • DENVER, CO • MAY 13-14, 2025

New Beef Safety Research Projects

The Foundation, through its post-harvest beef safety research contract with the Beef Checkoff, awarded several grants in response to Beef Safety Request for Proposals issued in fall 2024. Overviews of three of the newly funded projects follow.

From Trim to Table: Tracking *Salmonella* Dynamics, Including Levels and Survival, from Beef Trim to Ground Product, Kansas State University and Cargill

This research will conduct an inoculation study to evaluate the influence of *Salmonella* levels in beef trim (including lymph nodes) on *Salmonella* levels in ground beef, providing valuable insights for managing *Salmonella* in final product. *Salmonella* survival will be assessed during standard industry storage periods to further understand its persistence and potential risks in products intended for commerce.

Improving and validating the THERM model for predicting growth of *Staphylococcus aureus* in raw meat products during temperature abuse and come-up-time (CUT) deviations, University of Wisconsin – Madison

The current Temperature History Evaluation for Raw Meats (THERM) model, originally intended for use by small and very small processors who lacked refrigeration in their raw processing areas and now widely used at all levels of the meat processing industry to estimate pathogen growth in raw materials, may overestimate pathogen growth when following USDA temperature recommendations. This study will refine product categories and determine the growth of *Staphylococcus aureus* in uncured model meat products with varying pH levels and temperatures which represent come-up-time ranges where *S. aureus* may grow. A validated predictive model will be developed using a variety of different meat products and formulations.

Reliability and repeatability of digital PCR and VAE assays for the enumeration of *Salmonella* in beef samples, Florida State University and U.S. Meat Animal Research Center USDA-ARS

This study intends to optimize digital PCR (dPCR) and varying amplification efficiency (VAE) assay workflows for the detection and quantification of *Salmonella* load in beef samples. The reliability and repeatability of dPCR and VAE assays will be validated and their applicability will be compared with an AOAC performance-tested method. The application of a partition-based digital PCR approach will enable highly reliable and repeatable detection and quantification of *Salmonella* load in contaminated beef samples. The VAE assay will enable simple estimation of *Salmonella* levels in beef samples.

Information on the other newly funded projects will be shared in future issues of *Foundation Focus*.



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Meat Institute Protein PACT

Advanced *Listeria monocytogenes*
Intervention & Control Workshop
UNIVERSITY OF WISCONSIN, MADISON • JUNE 3-4, 2025

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Bryan Burns*
Carleton Farms/Rita Duyn
Barry Carpenter*
Coast Packing Company*
Nathan Fretz*
Greater Omaha Packing
Anne Halal
Hill Meat Company
Sarah Little*

KatieRose McCullough*
Julie Anna Potts*
Riser
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Stephen Sothmann
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Yosemite Meat
Eric Zito*

As of April 15, 2025
(*) Indicates multiple contributions

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Understanding *Salmonella* ecology and internal colonization in market hogs, University of Wisconsin-Madison, University of Arkansas

This study will use barcoded *Salmonella* to inoculated market hogs orally, intranasally, and at various locations intradermally to explore *Salmonella* ecology and internal colonization in market hogs. The findings are intended to address the following research questions: How quickly does *Salmonella* contaminate lymph nodes, tonsils, liver, spleen, cecal contents, and feces of market hogs?; and Does inoculation method (oral vs. intradermal) impact frequency and concentration of *Salmonella* recovered from inoculated market hogs?

Funded in part by the Pork Checkoff.

**Understanding the impact of the farm and lairage environments on *Salmonella* contamination in market hogs, University of Wisconsin-Madison, Kansas State University, Texas Tech University, USDA-ARS**

Salmonella contamination in market hog tonsils, lymph nodes, feces, and cecal contents likely occurs rapidly, and previous research suggests that the lairage period provides risk for cross contamination to occur. The study objectives are to detect and quantify *Salmonella* from market hogs on-farm, at lairage, carcass swabs, and lymph nodes. The *Salmonella* isolates will be characterized to determine their serotype and the presence of highly pathogenic *Salmonella* at the different stages of sampling. *Salmonella* concentration and serotypes in post-harvest samples will be evaluated to determine if it most closely represents *Salmonella* contamination on-farm or from lairage, and the impact of time spent in lairage.

Funded in part by the National Pork Checkoff.

**Survival of African swine fever in pork and processed pork products, Canadian Food Inspection Service, Agriculture and Agri-Food Canada**

African Swine Fever (ASF) is a contagious, haemorrhagic viral disease of pigs that is currently spreading westwards throughout Europe and eastwards into China, with significant economic losses along its path. While strict regulatory guidelines are in place to prevent the spread of this virus, little is known about the effectiveness of current meat processing methods in inactivating ASF. In addition, the matrix effect of individual meat products and ingredients on ASF survival is not well documented. This project aims to explore the survival of ASF in different meat products from ASF infected pigs as well as investigate the effect of different ingredients, cooking temperature, storage time and high pressure processing on ASF inactivation in different meat model systems.

Funded in part by the National Pork Checkoff under an ASF Partnership and administered by the Foundation.

**A surveillance of *Salmonella* in the lymph nodes of sows and boars, Kansas State University, Texas Tech University**

Salmonella contamination remains the leading food safety concern for pork products. The contribution of *Salmonella* in the lymph nodes in sows and boars is unknown. This study will determine *Salmonella* prevalence and concentration in the lymph nodes (subiliac, mesenteric, tracheobronchial, inguinal, axillary, pre-scapular) and tonsils of sows and boars at harvest. The impact of season and region on *Salmonella* prevalence and concentration in the lymph nodes of sows and boars will be evaluated. Positive samples will be serotyped.

Effect of minimally processed animal protein within the *Dietary Guidelines for Americans* on biomarkers for cognitive decline, South Dakota State University

Investigators will leverage an ongoing well-designed, randomized, controlled, crossover, feeding study following the *Dietary Guidelines for Americans* to establish the role of lean animal protein in cognitive health promotion. A minimally processed lean meat incorporated diet will be compared with an isocaloric lacto-ovo-vegetarian control. It is expected the addition of animal protein will enhance nutrient adequacy and reduce markers associated with cognitive decline and neurodegenerative diseases.

Characterizing *Salmonella* Isolates from Ground Beef in the United States, Texas Tech University, Kansas State University, University of Georgia, USDA-ARS, Meat Animal Research Center, Food Safety Net Services

It is hypothesized that *Salmonella* serotypes and presence of highly pathogenic *Salmonella* (HPS) in ground beef will vary by geographic location and season depending on the facility. Samples obtained from a separate study will be analyzed to determine the *Salmonella* serotype(s) present in each positive sample and the presence of HPS associated with U.S. ground beef.

Funded in part by the Beef Industry Food Safety Council.



Creating Alternative Support for Lethality and Stabilization for Heat Treated and Fully Cooked Meat and Poultry Products, University of Wisconsin, HansonTech

Nearly all meat processors in the United States utilize USDA, FSIS Appendices A and B to ensure adequate thermal lethality and stabilization is achieved for partially and fully cooked products. Through the development and release of updated versions in 2017 and 2021, and the realization that a host of potential food safety vulnerabilities exist, the widespread usefulness and in-plant practical application of these guidance documents has become a significant concern and practical challenge to implement. The primary objective of this study is to develop a scientific-based, regulatory-supported, and industry-useful thermal processing and cooling resource (e.g. cooking and cooling food safety handbook) for validating pathogen destruction and control, and regulatory compliance for partially and fully cooked meat products that can be used in conjunction with or in lieu of USDA, FSIS Appendices A & B.

Funded in part by the Beef Checkoff.



Funded by the Beef Checkoff

Revealing mechanisms for internal *Salmonella* colonization and persistence in porcine lymphoid and fat tissue, USDA-ARS-NADC - Food Safety and Enteric Pathogens Research Unit

Swine can become persistently infected with *Salmonella*, shedding little to no bacteria in the feces, until subjected to a stressful event, which increases fecal shedding. A clear understanding of the mechanisms of *Salmonella* persistence in porcine immune cells is needed to developing targeted intervention strategies to significantly reduce *Salmonella* carriage in swine and the risk of contamination of products and the environment. The overall hypothesis is that *Salmonella* resides in myeloid-lineage cells in porcine lymphoid tissues and fat, and subsequently modulates the cellular state to limit bacterial clearance. The objectives of this project is to identify the cell types harboring *Salmonella* in pig lymphoid and adipose tissue at various stages of colonization; characterize the cellular response; and identify mechanisms of intracellular colonization.

Funded in part by the National Pork Checkoff.



Funded by the Beef Checkoff and Administered by the Foundation

Analysis of beef *Salmonella* outbreaks using the USMARC SNP analysis pipeline, USDA-ARS, Meat Animal Research Center

Using the pipeline developed in a previously funded project (see Enhanced Characterization of Sequence Differences Among *Salmonella* isolates within SNP Clusters Identified by the NCBI Pathogen Detection System), genomes from previous beef *Salmonella* outbreaks will be evaluated to characterize the genomic variation between sequenced isolates related to the outbreak.

The findings will detail the reliability of Beef *Salmonella* outbreak traceback.



Funded by the Beef Checkoff

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4201 Wilson Blvd. Suite 0604
 Arlington, VA, 22203