



## ***This week's issue of AMSA eNews features***

- RMC 2015 Survey Wrap-Up and Winners Announced
- AMSA Members Published in Meatingplace - Exclusive: Intro to Dry and Semi-Dry Sausages
- AMSA Meat Science Review on the Efficacy of Detergent and Quaternary Ammonium Sanitizer
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## **RMC 2015 Survey Wrap-Up and Winners Announced**

Thank you AMSA members for all your great feedback on the 2015 post RMC survey! We appreciate the time and thought you put into answering each question and we will be using this information as we moved forward in planning the 2016 RMC. The Technical Planning Committee will start meeting later this month to discuss topics and speakers in hopes of having an outline for you, the members, by mid-November. Make sure to watch your email for updates and changes for 2016. Also mark your calendars, we will be launching the RMC Awards and Abstract submission sites in November.

This year everyone who completed the RMC survey was placed into a drawing for one of two \$25 Starbucks gift cards and we are excited to announce the winners! Congratulations to Randy Harp of Tarleton State University and Poulson Joseph with Kalsec, Inc. We thank you for your time and hope you enjoy a coffee, espresso, or caffè mocha latte on us!

*Join us in San Angelo for what will be a unique experience true to the spirit of the AMSA 69th RMC!*

## **AMSA Members Published in Meatingplace - Exclusive: Intro to dry and semi-dry sausages Larry Hand, Smithfield Foods, and Dan Glowski, John Morrell Food Group**

Fermented meat products are found throughout

### **AMSA Membership Information:**

*To update your AMSA membership information please [click here](#):*

### **AMSA's Sustaining Partners**

#### ***Diamond Sustaining Partner:***

Cargill  
Elanco Animal Health

#### ***Platinum Sustaining Partner:***

Smithfield Foods  
Tyson Foods, Inc.  
Zoetis

#### ***Gold Sustaining Partners:***

Hormel Foods, Inc.  
Kemin Food Technologies  
Merck Animal Health  
National Pork Board

#### ***Silver Sustaining Partners:***

ADM  
ConAgra Foods  
Corbion Purac  
DuPont Nutrition & Health  
Hawkins Food  
Ingredients Group  
Iowa State University  
Kraft Foods Inc./Oscar Mayer  
JBS, USA  
Johnsonville Sausage Company

the world. Developed originally to simply preserve precious meat supplies, they have evolved into the elite meat products of the world.

Fermented meat products involve science, art and mystique. Dry and semi-dry sausages represent one of the oldest forms of meat preservation. When the domestication of animals and surpluses of meat began to appear in Middle Eastern countries around 5000 B.C., the need to preserve it became evident.

Several thousand years ago, our ancestors discovered that when salt was added to meat, either whole or cut into pieces and then stuffed into animal casings and dried, it would keep for months under normal climatic conditions.

Genoa salami is of Italian origin and, according to USDA/FSIS Regulations, product produced in the United States must conform to the Standard of Identity relative to chemical composition and meat formulation. Specifically, Genoa salami must have a moisture-protein ratio of less than or equal to 2.3 to 1, and it must be predominately pork as formulated. Traditionally, Genoa salami is considered less "heat-processed" than other dry sausages, but it is region- and manufacturer-dependent. Other manufacturer-specific characteristics may include surface mold growth, natural casings, coarse grind and the use of wine and garlic as flavor components. Genoa salami is rarely smoked.

Hard salami is of German origin and, by FSIS Standards of Identity, must meet a moisture-protein ratio of 1.9 to 1 or less in chemical composition. There are no specific meat composition or spice requirements, but traditionally, hard salami is made with pork and beef, and it may be smoked. Garlic and white or black pepper are typical flavorings used in salami.

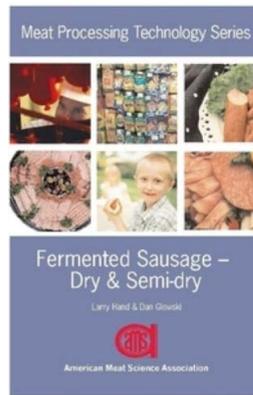
Italian salami is a specific type of hard salami that has the same moisture-protein requirements as hard salami: a moisture-protein ratio of less than or equal to 1.9 to 1. It is typically made of all pork trimmings but may contain small amounts of beef, depending on region and producer. The traditional Italian salami is processed such that a white mold grows over the surface of the casing during the drying and maturation process. This imparts unique flavors to the product both by the mold growth itself from enzymatic changes as well as the resulting increase in product pH. Products such as these are commonly produced in the San Francisco area, hence the term "West Coast-style salami." Italian salami products often contain extenders such as non-fat dry milk, or, less commonly, soy proteins.

[Click here to read more!](#)

More information on "Fermented Sausage – Dry and Semi-Dry" is found in the AMSA's [Meat Processing Technology Series modules](#) written by key processing authorities focused on all aspects of processed meat manufacturing.

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**AMSA Meat Science Review on the Efficacy of Detergent and Quaternary Ammonium Sanitizer**  
*Amy Parks and Mindy Brashears, Texas Tech*



Sealed Air's Cryovac® brand  
Texas Tech University  
International Center for  
Food Industry  
Excellence

**Bronze Sustaining Partners:**

Certified Angus Beef  
Colorado State University  
Center for Meat Safety and Quality  
ICL Food Specialties  
IEH Laboratories & Consulting Group  
Kerry Ingredients  
Land O'Frost Inc.  
Maple Leaf Foods  
Oklahoma State University  
Perdue Foods  
Seaboard Foods  
USDA, AMS, Livestock, Poultry and Seed Program  
U.S. Meat Export Federation



To make a donation to the AMSA Educational Foundation please click below!

**AMSA Educational Foundation General Fund - used in the area of greatest need**

**AMSA Meat Judging Fund**

**Mentor Recognition Funds, click here to donate today!**

- *Melvin "Hunter" Hunt (supports student travel to international meetings)*
- *Robert G. Kauffman (support meat science student development)*

## University

Shiga toxin-producing *Escherichia coli* (STEC) are pathogens of concern across various food products as they have been connected to a wide variety of outbreaks and recalls. Most of the scientific literature concerning the removal of attached STEC cells focuses on *E. coli* O157:H7 as it was the first STEC to be considered an adulterant in non-intact beef products in the United States after a large outbreak from undercooked ground beef patties in 1982 (6).

Worldwide, non-O157 STEC strains are estimated to cause 20 to 50% of STEC-related infections (5). A review of outbreaks from 1983 through 2002 found six serogroups (O26, O111, O103, O121, O145, and O45) to be the most common non-O157 STECs, causing an estimated 70% of non-O157 STEC infections in the United States (1). The United States Department of Agriculture Food Safety and Inspection Service (USDA-FSIS) has included these serogroups along with *E. coli* O157:H7 as adulterants in non-intact beef products (9).

Biofilms are communities of microorganisms that can form on both living and non-living surfaces, including those found in food-processing plants. Biofilm formation depends on the microorganisms present and can be affected by a variety of environmental conditions including nutrient availability, temperature, the cleanliness of the surface and the presence of other microorganisms (4, 7, 8, 10). Previous studies have determined that *E. coli* O157:H7 can attach and form biofilms on surfaces such as stainless steel and plastic (2, 7, 8). A series of studies, including two conducted in our laboratory, have shown STEC attachment is strain-dependent (9) showing that assumptions cannot be made about the entire serogroup in terms of attachment to and biofilm formation on surfaces.

A complete sanitation program including the removal of solids and utilization of both detergents and sanitizers within a food-processing environment is essential to producing safe, wholesome products for consumers to enjoy. However, only a few studies have utilized a combination of detergents and sanitizers to determine their effectiveness against biofilms containing pathogens like STECs that are attached to commonly used surfaces like stainless steel. Mimicking food-processing environments where STEC cells could be found was an important aspect of this study. The objective of this study was to determine the effectiveness of a detergent and a quaternary ammonium sanitizer to remove STEC cells attached to stainless steel. Quaternary ammonium is a commonly used sanitizer within the food industry that is effective in killing pathogens, but doesn't cause corrosion of equipment.

Multiple strains from all seven STEC serogroups (O157:H7, O26, O45, O103, O111, O121, and O145) were screened for their ability to attach to stainless steel in full and minimal nutrient media over time at 25°C in previous studies. Attachment to stainless steel was strain-dependent, and we found that attachment of STEC strains was higher under minimal nutrient conditions (data not shown). One strain from each serogroup that showed a high affinity to attach to stainless steel in minimal nutrient media was used. For each strain (n=7), 5 pieces (coupons) of stainless steel were incubated in minimal nutrient media for 24 h at 25°C to allow the STEC to attach to the surface. After 24 h of attachment, the loose cells were gently removed by rinsing with water.

- William Moody  
(supports meat science students)
- Robert Rust  
(supports meat science students)
- H. Russell Cross  
(supports meat judging and student activities)
- Robert Cassens  
(support PhD students)
- C. Boyd Ramsey  
(supports undergraduate students)
- Jimmy Wise  
(support meat judging activities)
- F. C. Parrish  
(support will endow AMSA student activities)
- Dell Allen  
(supports meat judging)
- John Forrest  
(supports AMSA programs)
- Dale Huffman  
(supports AMSA programs)
- Robert Bray  
(supports R.C. Pollock Award)
- Vern Cahill  
(supports R.C. Pollock Award)
- C. Ann Hollingsworth  
(supports student scholarships)
- Donald Kinsman  
(supports student international program)
- Roger Mandigo  
(supports RMC)
- Robert Merkel  
(supports RMC)
- Gary Smith  
(supports meat judging program)

[Click here to read the full article!](#)

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## University of Florida Research Projects Aid Agriculture Industries

The University of Florida's Department of Animal Sciences faculty works closely with industry groups including several livestock associations, Florida Farm Bureau, and others to develop educational programs for their members. Schools, institutes, demonstrations, short courses, and field days are some of the activities resulting from the programs. Extension activities are viewed as a responsibility of the entire department, and faculty contributes to these activities. The Department of Animal Sciences Meat Science Research program is regularly supported by grants from the Florida Beef Council. The meats faculty partners with faculty at Florida A&M University and other departments to cooperate in research.

The meats research efforts address the needs of the Florida producer and meat industry, with projects dealing with beef, quality of crossbred carcasses and meat processing. Dr. Chad Carr and Dr. Dwain Johnson, professors in the Department of Animal Sciences, recently submitted a proposal to Adena Meats on validating the shelf life of fresh ground beef. The objectives of the research proposal were to quantify the color, shelf-life, and microbial soundness of ground beef subjected to industry standard dark storage and aerobic overwrap packaging.



Graduate students in the department are greatly involved in research efforts as well. One of these efforts was to determine if quantifying loin quality is an effective means to stratify ham quality differences and ultimately optimize quality for both processors and consumers.

Another study conducted by Dr. Dwain Johnson was the influence of Brahman genetics on beef carcass and palatability traits within a multibreed herd. This long-term study has been ongoing since 1989. The data set from this study provides a platform for the new faculty to explore tenderness and provide a more consistent eating experience for tropically adapted animals that must be utilized in environments such as Florida.

[Click here to read the full article!](#)

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## AMSA to Co-Sponsor Pathogen Control and Regulatory Compliance in Beef Processing Conference

September 9-10, 2015  
Chicago, IL

Don't miss this year's Pathogen Control and Regulatory Compliance

R. C. Pollock  
(supports R.C.  
Pollock Award)

in Beef Processing Conference. Since 2007, this conference has brought together top experts in food safety systems, regulatory issues, and microbial control for a comprehensive educational experience. Program highlights include:

- STEC and Salmonella: What does the latest data show and how are processors expected to react?
- Validation: The final FSIS validation guidelines go into effect in 2016. Make sure you are prepared.
- Regulations: Hear straight from FSIS their top priorities and changes ahead.
- Mechanically Tenderized Labeling: Understand the requirements for labeling and cooking instructions.

For full program and speaker information, [click here](#).

Co-sponsoring organizations include: American Meat Science Association, American Association of Meat Processors, Beef Industry Food Safety Council, Canadian Meat Council, Chicago Midwest Meat Association, International HACCP Alliance, Meat Importers' Council of America, Southeastern Meat Association, and Southwest Meat Association.

Sponsorship and exhibit opportunities available. Contact Jim Goldberg at [jgoldberg@meatinstitute.org](mailto:jgoldberg@meatinstitute.org).

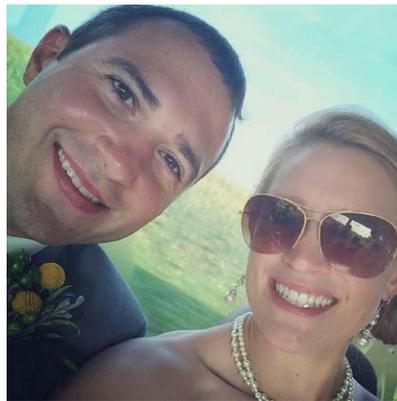
Hotel Details:  
Hilton Rosemont  
5550 N. River Road  
Rosemont, IL 60018  
(847) – 678-4488

- **Early Registration Discount Ends: August 10th.**
- **Hotel Block Expires: August 18th.**

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## Member News:

The sun was shining and the weather was just perfect as Rachel "Smith" Adams, AMSA Youth Programs Coordinator, married her best friend Justin Adams on July 25th at a beautiful ceremony at New Hope Christian Church in Bridgeport, IL surrounded by family and friends. After the ceremony and a fun ride on the party bus to the reception site, the night was filled with love, laughter, great food and of course dancing! Rachel joined the AMSA team this past January and currently oversees logistics, fundraising and contest arrangements for the intercollegiate meat judging program and the national 4-H meat evaluation and retail identification contest. She received her bachelor's degree in animal science from the University of Illinois and her master's degree in meat science from Iowa State University. Rachel resides in southern Illinois on her family's farm with her husband Justin.



The landscape and scenery was just breathtaking as Brittney "Scott" Bullard married her best friend in an



intimate ceremony surrounded by close family and friends on the "Delmore" estate in Wellington, CO on July 25th, 2015. In true fashion they declared their love for each other with the release of a clay pigeon, united as one firing shots together at the clay pigeon to symbolize new beginnings, freedom and happiness. This was a very

special moment for the couple and for those gathered to witness this symbolism of two great people expressing their love for each other. Brittney is currently the West Region Director for the AMSA Student board of Directors and working on her PhD program at Colorado State University where she hopes to continue her education in meat safety and microbiology. In 2012, she received her Bachelors in Animal Science from Cal Poly and went to work for Harris Ranch Beef Company in the food safety and quality department for 6 months before attending Colorado State University to obtain her Master's degree in Meat Science, which she received in 2015. Her thesis projects primarily focused on pathogen reduction in beef and poultry products as well as in-plant validations in beef harvest systems.

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## Upcoming Conferences – Save the Date!

**PORK 101.** AMSA is excited to announce that the next 2015 PORK 101 course will be held October 19-21 at Iowa State University, in Ames, Iowa. PORK 101 is hosted by AMSA in cooperation with the National Pork Board and is sponsored by Elanco Animal Health. PORK 101 is co-sponsored by the American Association of Meat Processors (AAMP), American Society of Animal Science (ASAS), North American Meat Institute Foundation (NAMIF) and the Southwest Meat Association (SMA). Registration for AMSA members and other partnering organizations is \$800. Non-member registration is \$950. A special thank you goes out to Elanco Animal Health, a company dedicated to enhancing animal health through science and innovation. For more information or questions regarding PORK 101 please go [online](#) or contact [Deidrea Mabry](#).

**2016 Beef Industry Safety Summit.** Save the Date: 2016 Beef Industry Safety Summit will be held March 1-3, 2016 in Austin, TX. More information to come on [www.bifsco.org](http://www.bifsco.org) or [www.beefresearch.org](http://www.beefresearch.org).

### Registration and Housing Now Open for 2016 IPPE.

Registration and housing are now open for the 2016 International Production and Processing Expo (IPPE), the world's largest annual meat, poultry and feed industry trade show, which will be held January 26-28, 2016, at the Georgia World Congress Center in Atlanta, Georgia. More details are [online](#).

**5th International Symposium on Thermal treatment of meat and meat products:** will be held September 22-25, 2015 at the International Summer School at the Max Rubner-Institut in Kulmbach. This year, we will focus on developments in thermal processing of meat and meat products. Heating is the oldest and

most common process in food preservation and can even be considered as the oldest technology used by human beings. However, balancing microbiological safety while maximizing nutrition values and culinary sensations is far from being trivial, and therefore still a matter under investigation. What contributions can we expect from new scientific approaches like molecular gastronomy or gastrophysics to understand the underlying processes? The Summer School will give an overview on principles of heat treatment technology, effects of elevated temperatures on microorganisms occurring in meat systems, and changes in chemical and biophysical properties in meat products under various heating conditions. Formation of heat induced contaminants as well as fraud and adulteration are topics of growing interest, with focus on analytical approaches concerning undeclared non-meat ingredients or animal species. More information can be found [online](#).

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## AMSA Educational Webinars

**Meat in the Diet ~ Science of Meat**  
**August 10, 2015 from 11:30 am – 12:30 pm CDT**

Overview:

About one-half of all American adults have a chronic disease that could be prevented with diet or physical activity. This is prompting an active national (and international) dialogue about the optimum human diet. At the center of the debate is meat's role in health. Is there a need for meat in the diet? How much is ideal? What are the benefits? What are the risks? This session will explore the current science on meat's role in health and share insights about the consumer's mindset about healthy eating in America today.



Presenter:

Dr. McNeill serves as the Executive Director of Human Nutrition Research for the National Cattlemen's Beef Association (NCBA).

Register:

This AMSA Educational webinar is interactive and will last approximately 60 minutes (including Q&A). Registration is complimentary, but you must first register by clicking on the enrollment:

<https://attendee.gotowebinar.com/register/4085459021394408193>.

Once you have registered, you will receive an e-mail message confirming your enrollment status and information that you need to join the webinar. For more information please contact Deidrea Mabry at [dmabry@meatscience.org](mailto:dmabry@meatscience.org).

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## AMSA Meat Science Career Center

The American Meat Science Association knows that our greatest

resource is our people, and you can remain confident that you are hiring the best educated, most talented and highly professional individuals when you tap into our pool of qualified individuals.



### New Job Postings:

- Sr. Scientist - Meat, Seafood & Poultry ~ Innophos, Inc.
- Vice President of Sales ~ Food Safety Net Services
- Director Research and Development ~ Shoher Search and Consulting
- Assistant Professor - Poultry Production ~ Auburn University
- Food Development Marination Manager ~ Colorado Premium Foods
- Packaging Application Specialist ~ Sealed Air Corporation
- Assistant Professor of Animal Science ~ Tarleton State University
- Associate Director, Producer Education ~ National Cattlemen's Beef Association
- Senior Director, Beef Cattle Scientist ~ National Cattlemen's Beef Association
- Senior Food Technologist ~ Foster Farms
- Director of Sales - HPP ~ True Fresh HPP
- Chief Science Officer ~ Food Safety Net Services
- Director Research and Development ~ Shoher Search and Consulting

***Got news? Send information and news items to [Deidrea Mabry](#) for inclusion in a future edition of AMSA eNews.***

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### **2015 AMSA Calendar of Events**

**August 10 - AMSA Educational Webinar - Meat in the Diet - Science of Meat**

**September 12 - National Barrow Show Meat Contest** - Austin, MN

**September 26-27 - Beef Empire Days** - Garden City Community College and Tyson Foods, Inc. - Garden City, KS

**October 3 - Eastern National Intercollegiate Meat Judging Contest** - Wyalusing, PA

**October 18 – American Royal Intercollegiate Meat Judging Contest sponsored by Elanco Animal Health-** Nebraska Beef, Omaha, NE

**October 19 - 21 - AMSA PORK 101 - Iowa State University** - Ames, IA

**October 20 - National 4-H Meat Evaluation & Identification Contest** - Kansas State University, Manhattan, KS

**November 1 - Cargill Meat Solutions High Plains Intercollegiate Meat Judging Contest** - Friona, TX

**November 15 – International Intercollegiate Meat Judging Contest** - Tyson Foods, Dakota City, NE

### **Reciprocal Meat Conference 2016-2017**

**June 19-22, 2016 - Angelo State University** - San Angelo, Texas

**June 18-21, 2017 - Texas A&M University** - College Station,  
Texas

**June 2019 - Colorado State University** - Fort Collins, Colorado

## **International Congress of Meat Science and Technology**

August 23-28, 2015 – Clermont-Ferrand, France

2016 – Bangkok, Thailand

2017 – Cork, Ireland

2018 – Australia

2019 – Germany

2020 – USA (joint meeting with the Reciprocal Meat Conference)

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