

This week's issue of AMSA eNews features

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AMSA Student Member Board of Directors – Fall Meeting Update **By Loni Woolley, SBOD President**

This fall, the AMSA Student Board of Directors has been working diligently to plan upcoming events for the student membership. A significant portion of that planning was accomplished during our annual Fall Board Meeting, which was held in Wichita, KS, last week, and was **graciously hosted by Cargill**. The chance to come together for the meeting in Wichita allowed for great discussion and planning of activities associated with RMC 2015. We are on track for another great RMC with a number of exceptional, unique opportunities for students to gain both technical knowledge and network with other AMSA student and professional members!



Along with planning RMC events, the Student Board also began making arrangements for the 2015 AMSA Student Leadership Conference, to be held during the spring semester. Be on the lookout for more details regarding SLC in eNews in the upcoming weeks! It's sure to be another event you won't want to miss! The AMSA student membership has a strategic plan, used to guide decision making and planning for the organization,

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:

Kraft Foods Inc./Oscar Mayer
Smithfield Foods
Zoetis

Gold Sustaining Partners:

Merck Animal Health
National Pork Board
The Beef Checkoff
Tyson Foods, Inc.

Silver Sustaining Partners:

ADM
ConAgra Foods
Corbion Purac
DuPont Nutrition & Health
Hawkins Food Ingredients Group
Hillshire Brands Company
Hormel Foods, Inc.
Iowa State University
JBS, USA
Johnsonville Sausage Company
Kemin Food Technologies
Sealed Air's Cryovac® brand
Texas Tech University
International Center for Food Industry Excellence

Bronze Sustaining Partners:

Certified Angus Beef
ICL Food Specialties

which is updated every few years. Last year, the student board spent numerous hours pouring over the strategic plan and updating it to fit the current state of the industry and the goals of the AMSA student membership. This year, we continued the update in order to keep goals current and keep reaching new heights as an organization. The new version will be available on the website this fall. Remember that the Student Board members are representatives of the student membership as a whole, and we want your input and opinions as we continue to plan for 2015.

Thanks to those who have participated in committee meetings and taken surveys and we look forward to continued involvement moving forward. I hope everyone is having a great fall semester, and please do not hesitate to let me know if you have questions or comments (loni.woolley@ttu.edu).

AMSA Members Published in *Meat Science* September and October

A manuscript titled "**Consumer assessment of beef palatability from four beef muscles from USDA Choice and Select graded carcasses**" was authored by M.R. Hunt, A.J. Garmyn, T.G. O'Quinn, C.H. Corbin, J.F. Legako, R.J. Rathmann, J.C. Brooks, and M.F. Miller. In this study "consumer sensory analysis was conducted to determine differences in beef palatability between two quality grade categories [Upper 2/3 (Top) Choice and Select] and four muscles [*longissimus lumborum* (LL), *gluteus medius* (GM), *serratus ventralis* (SV), and *semimembranosus* (SM)]. Generally, tenderness, flavor, and overall liking scores were more desirable for Top Choice compared to Select, regardless of muscle. Consumers rated LL as more tender ($P < 0.05$) than SV and SM, but similar to GM ($P = 0.52$). [Click here to read more!](#)

R. Ramanathan *et al.* recently published a manuscript titled "**Effects of postmortem storage time on color and mitochondria in beef.**" "To assess the effects of aging time (0, 15, 30, and 45 d) and temperature (0 or 5 °C) on beef mitochondria and steak color, vacuum packaged *longissimus* (n = 15) and cardiac muscles were assigned to 1 of 6 temperature × time combinations. As time increased, initial red color intensity increased whereas both mitochondrial oxygen intensity increased whereas both mitochondrial oxygen consumption and color stability decreased. The decrease in mitochondrial oxygen consumption associated with longer aging times will increase initial color intensity. However, this improvement in color development will be negated by the decreased color stability that results from the effects of storage on mitochondria, [click here to read more!](#)



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

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

A manuscript titled ***"Effect of enhancement on the formation of heterocyclic amines in cooked pork loins: Preliminary studies"*** authored by T. A. Houser, M. C. Hunt *et al.* explored "Heterocyclic amines (HCAs) which are produced in meats cooked at high temperature a risk factor for certain human cancers. This study evaluated the effect of enhancement on HCA formation in cooked pork loins. Three samples of pork loin were prepared including non-injected loin, 12% water-injected loin, and 12% salt/phosphate-injected loin. The HCAs were identified in all samples: PhIP (2-amino-1-methyl-6-phenylimidazo [4,5-b]pyridine), MeIQx (2-amino-3,8-dimethylimidazo [4,5-f]quinoxaline), and DiMeIQx (2-amino-3,4,8-trimethylimidazo [4,5-f]quinoxaline). Injection of salt/phosphate significantly reduced the level of PhIP by 42.7%, MeIQx by 79.0%, and DiMeIQx by 75.0%. Enhancement with water alone did not reduce HCA formation." [Click here to read more!](#)

E. Puolanne recently published an manuscript titled ***"Temperature induced denaturation of myosin: Evidence of structural alterations of myosin subfragment-1."*** In this study "denaturation of myofibrillar proteins in porcine longissimus thoracis et lumborum muscle was investigated after pre-rigor temperature incubation at 20, 30 and 40 °C. At 24 h myofibrils were isolated and myosin was further cleaved by chymotrypsin. High temperature pre-rigor induced release of myosin S1 (subfragment-1), less ($P < 0.05$) Ca^{2+} -ATPase activity and structural alterations of the region of the myosin molecule that harbors S1. Surface hydrophobicity of myofibrils from the 40 °C group increased ($P < 0.001$), suggesting a temperature-induced structural rearrangement exposing hydrophobic groups on the surface of myofibrils which in turn may explain the reduced water-holding of PSE meat." [Click here to read more!](#)

"The impact of supplementing lambs with algae on growth, meat traits and oxidative status" was published by D.L. Hopkins *et al.* The study "examined the effect of supplementing lambs with algae. Forty, three month old lambs were allocated to receive a control ration based on oats and lupins (n = 20) or the control ration with DHA-Gold™ algae (~ 2% of the ration, n = 20). These lambs came from dams previously fed a ration based on either silage (high in omega-3) or oats and cottonseed meal (OCSM: high in omega-6) at joining (dam nutrition, DN). Lamb performance, carcass weight and GR fat content were not affected by treatment diet (control vs algae) or DN (silage vs OCSM). Health claimable omega-3 fatty acids (EPA + DHA) were significantly greater in the LL of lambs fed algae (125 ± 6 mg/100 g meat) compared to those not fed algae (43 ± 6 mg/100 g meat) and this effect was mediated by DN. Supplementing with algae high in DHA provides a means of improving an aspect of the health status of lamb meat." [Click here to read more!](#)

C.M. Garner, J.A. Unruh, M.,C. Hunt, E.A.E. Boyle, and T.A. Houser recently published a manuscript titled ***"Effects of subprimal type, quality grade, and aging time on display color of ground beef patties."*** In this study a "factorial design was used to evaluate the effects of two subprimal types (chuck roll and knuckle), two quality grades (Premium Choice and Select), and three vacuum-storage aging times before processing (7, 21, and 42 d) ground beef patty display color attributes. Patties from chuck roll and Premium Choice subprimals had brighter red visual color scores, less discoloration, and higher L*, a*, b*, and chroma values than those from knuckle and Select subprimals, respectively. With an increased display time, patties became darker red, more discolored, and had decreased L*, a*, b*, and chroma values. Therefore, aging Premium Choice chuck rolls for less time (fewer than 21 d) could maximize display color life." [Click here to read more!](#)

D.L. Hopkins *et al.*, published a manuscript titled ***"Comparison of rankings for lean meat based on results from a CT scanner and a video image analysis system."*** In this study "Coopworth cross lambs born over three years were examined in this study. Differences between two machines; a computer tomography (CT) scanner and a VIAScan® system for the estimation of carcass lean weight in lamb carcasses was examined. The CT scanner provided a significantly higher estimate of carcass lean. The rank correlation (0.84) between the CT scanner and the VIAScan® system for the prediction of carcass lean was significant, but there was a different ranking for carcass lean depending on which machine was used. This has important ramifications for the use of VIAScan® data in the New Zealand Sheep Improvement Ltd genetic programme." [Click here to read more!](#)

NAMA Report: Almanza Updates FSIS Actions

Bryan Salvage, MeatPoultry.com

Al Almanza, administrator of the Food Safety and Inspection Service (FSIS) at the US Department of Agriculture and USDA's recently named Deputy Under Secretary for Food Safety, addressed a crowded room during the North American Meat Association's (NAMA) annual Beef Safety Conference on October 15 in Chicago, IL. While the focus on this year's program is "Pathogen Control and Regulatory Compliance in Beef Processing", he updated the crowd on FSIS actions regarding poultry slaughter, grinding logs/tracebacks, STEC testing, mechanically tenderized beef, consumer education and HACCP validation.

"This year, our focus has truly been on modernizing food safety, doing what makes sense, and recognizing the need for strong, science-based food-safety standards supported by sound risk assessments," Al Almanza said. "And we will continue to do that as we move into 2015 and beyond."

- In addressing the finalized poultry rule, Almanza said he's happy to be moving forward on this, but there is still more work to be done. "The final rule has both mandatory and voluntary components for poultry facilities," he added. "
- FSIS announced new, expedited traceback and traceforward procedures in August that will allow the agency to trace contaminated ground beef to its source more quickly by conducting immediate investigations at businesses whose ground beef tests positive for E. coli O157:H7 during initial testing and at suppliers that provided source materials.
- Regarding Shiga toxin-producing E. coli (STEC) testing, Almanza said progress has been made on the agency's analysis of the costs of STEC testing and they have assessed the costs of expanding testing to bench trim and ground beef.
- FSIS also hopes to move forward this year on finalizing the proposed rule for labeling beef products that have been mechanically tenderized.
- Research indicates the mechanical tenderization process may transfer pathogens from the outside of the meat into the meat, he added, which poses a greater risk to public health than intact beef products.
- Almanza also said the guidance for HACCP systems validation is in clearance and that the agency hopes to announce it in the Federal Register in the near future.

To read the full article by Bryan Salvage with MeatPoultry.com [click here](#).

IPPE: It's not just a Poultry show anymore!

International Poultry Expo, International Feed Expo, and International Meat Expo integrated their tradeshow in 2013, under the International Production & Processing Expo. The 2015 IPPE will bring together more than 1,100 exhibitors and over 25,000 attendees in Atlanta from January 27 - 29, 2015. We look forward to seeing you there! Registration for IPPE includes entrance to the trade show exhibits and select education programs.

The American Meat Institute (AMI) presents a wide variety of educational workshops designed especially for the meat industry. You will find a focus on food safety, plant operations, sustainability and other important topics.

New this year at IPPE, AMSA will be hosting a ½ day workshop highlighting many important components of the AMSA PORK 101 course. This session will cover quality and consistency issues in the pork industry including value differences in swine, pork carcasses, pork primals and processed pork products. More information on this workshop will be sent out in a few weeks.

For more information on IPPE and the different educational workshops go to: <http://ippexpo.org/>.

Young Leaders Program: IPPE's 30 Under 30 Program

The International Production & Processing Expo is targeting young professions who normally would not have the opportunity to attend the IPPE. The American Feed Industry Association (AFIA), the American Meat Institute (AMI) and U.S. Poultry & Egg Association (USPOULTRY) want to recognize professional leadership qualities and to provide exposure to the world's largest show involving the production and processing of meat and poultry products and the manufacture of feed and pet food products. Selected applicants will receive a full, complimentary registration to IPPE to be held in Atlanta, Ga., from Jan. 27-29, 2015. The registration will allow attendance to all complimentary education and one paid workshop.

Additionally, the program will provide two complimentary nights of lodging if booked through the program. Nomination must be received by November 1 with a signature from a member of your management team. For more information and to apply [click here!](#)

Antibiotic Use and Resistance: Moving Forward Through Shared Stewardship

NIAA Antibiotic Symposium November 12-14 Atlanta, GA. Participate in an active and meaningful dialogue with some of the best speakers representing both human health medicine and animal agriculture. Historically, the National Institute for Animal Agriculture (NIAA) Antibiotics Symposium has brought together academia, government researchers, the scientific community and stakeholders within animal agriculture, human medicine and the environment to share and learn from each other in order to seek resolution about the often misunderstood issues of antimicrobial use and resistance. This year will be no different. The goal of the symposium is to educate attendees about minimizing resistance and maintaining antimicrobials important for animal and human health. Keynote speakers representing both the animal and human health communities will identify and prioritize key resistance issues at the human and animal interface, present stewardship programs and metrics of success to minimize resistance, and conclude with real-world solution strategies to move forward. [Click here to register!](#)

AMSA Meat Science Career Center - Current Job and Internship Postings

The American Meat Science Association knows



Meat Industry CareerLink

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.

Current Job and Internship Postings:

- Plant Engineer ~ Smithfield Farmland
- Food Safety Superintendent ~ Cargill Value Added Meats
- Manager, Business Development ~ Smithfield Farmland HDQ
- Maintenance Supervisor ~ Smithfield Farmland-Kinston
- Animal Agriculture Operations Intern ~ Cargill
- Animal Agriculture Food Safety, Quality, and Regulatory Intern ~ Cargill
- Food Scientist ~ Cargill
- Director of Pork Supply ~ Applegate
- Live Production Intern-Summer 2015-Barron ~ Jennie-O Turkey Store, Inc.
- Meat Processing Center Manager ~ Cal Poly State University
- Business Development Manager ~ Packers Sanitation Services, Inc.
- Internship ~ Urner Barry
- Operations/Quality Assurance Internship ~ OSI Group

For more information on the AMSA Meat Science Career Center please visit the [website](#) or contact [Deidrea Mabry](#) at 1-800-517-AMSA ext. 12.

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

2014-2015 AMSA Calendar of Events

October 18 - Eastern National Intercollegiate Meat Judging Contest - Wyalusing, PA

October 20-23 - 2nd International Symposium on Fermented Meats - Valencia, Spain

October 21 - National 4-H Meat Evaluation & Identification Contest - Kansas State University, Manhattan, KS

November 2 - Cargill Meat Solutions High Plains Intercollegiate Meat Judging Contest - Friona, TX

November 16 – International Intercollegiate Meat Judging Contest - Tyson Foods, Dakota City, NE

January 27-29 - International Production and Processing Expo - Atlanta, GA

March 3-5 - Beef Safety Summit - Dallas, TX

March 4-5 - International Livestock Congress-USA

– Houston, TX

**June 14-17 - AMSA 68th RMC University of
Nebraska** - Lincoln, NE

Reciprocal Meat Conference 2015-2016

June 14-17, 2015 - *University of Nebraska* - Lincoln,
Nebraska

June TBD, 2016 - *Angelo State University* - San
Angelo, Texas

International Congress of Meat Science and Technology

August 17-22, 2014 – Punta del Este, Maldonado,
Uruguay

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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