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Nebraska pork talk

Nebraska Pork Talk is published bi-monthly by the Nebraska Pork Producers Association, Inc. (NPPA) to a circulation of approximately 4,900, including all identified Nebraska pork producers and a variety of industry supporters.

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All inquiries and address corrections should be directed to the Nebraska Pork Producers Association.

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Southwestern Grilled Pork Tenderloin

INGREDIENTS	DIRECTIONS
2 Pork tenderloins, (1 1/2 pounds total)	In small bowl, mix all ingredients except pork well. Rub mixture over all surfaces of the tenderloins. Cover and refrigerate 2–24 hours.
5 Teaspoons chili powder	
1 1/2 Teaspoons oregano	Grill over medium-hot fire, turning occasionally, for 15–20 minutes, until internal temperature on a thermometer reads 145 degrees F.
3/4 Teaspoons ground cumin	
2 Cloves garlic, crushed	Let tenderloin stand 5 minutes before slicing. Slice to serve.
1 Tablespoon vegetable oil	Serves 6.

pork checkoff

Portions of Nebraska Pork Talk are partially funded by Nebraska pork producers and their checkoff investments.

Love from America

Nice to MEAT you!

by Karen Grant, NPPA Director

"Gochipo", sumptuous pork raised on high-quality grain from fertile American soils. Its flavor is juicy and remarkably healthy. Once you eat it, you won't be able to stop.

USMEF recently unveiled this theme at the FOODEX 2015 in Tokyo, Japan.

I represented the Nebraska Pork Producers as a member of the USMEF team that recently traveled to Tokyo, Japan and Shanghai, China. I had the privilege of visiting the FOODEX where 80 countries showcase new food products. Barbecue pork was one of many showcase products. Pork consumption is on the rise due to the realization they need more iron in their diets, pork can be prepared quickly, and due to the increasing cost of fish.

The consumers want a face with their food purchases. Here, Karen Grant is showing photos of the pigs on her farm to bloggers in Tokyo, Japan. The consumers want reassurance their food is safe to eat.

Our team visited with importers from Cargill, JBS, NBP, and Tyson, as well as Sumisho Foods. The port slowdown is still fresh in their minds as they were affected by either having bought fresh pork and having it frozen while on ship and selling as frozen product or not having pork to sell.

Ms. Rika Yukimasa, a well-known cooking specialist, prepared delicious pork and beef entrees for approximately 35 women age 30-40 as well as our team. The women are bloggers. Ms. Yukimasa begins her presentation explaining the benefits of pork in their diet.

The team visited the Mitsukoshi Department Store that observe food trends and high-end products. We also made a stop at Aeon Retail featuring a USMEF in-store demo.

While in Shanghai, we toured the Wet Market which is similar to a local Farmers' market on a much larger scale. We visited cold storage facilities and also an importer of one of the largest Chinese-cured pork processors.

The market-theme restaurants, trade sector and retailer/Ecommerce in China is promoting is "safety and healthy". Consumers want to be assured their food is safe. The information that was repeated the most on our visit was the consumer wants to know where their food came from and that it is a safe product. They want a picture of the producer with the product; they want a face with the food they purchase.

We visited a pork distributor and pioneer of China Online Merchandising. Ecommerce is growing steadily. The option to go online, order the food items you want and state a time you want groceries delivered to your door has been well accepted versus stopping at the supermarket after work, taking the groceries on the journey home—usually by bus, a crowded train, biking, walking or a combination of three. This can take well over an hour.

I am honored to have been a member of the team. I learned much and appreciate getting the opportunity to represent the Pork Industry.

SAVE THE DATE

14th Annual Pork Chop Scramble

Friday, June 26th
Shot gun start at 9:00 a.m.
Quarry Oaks Golf Course
near Ashland, NE

Submit your golf registration and sponsorship at **nepork.org**

Will You Be the First?

America's Pig Farmer of the Year Award

On Nebraska pig farms large and small, our producers work hard every day to build consumer trust by raising pigs right to produce the best pork ever. Now, one of you has a chance to represent our state and pig farmers everywhere by applying for the Pork Checkoff's new America's Pig Farmer of the Year℠ award.

This prestigious honor will be awarded annually to a U.S. pork producer who excels at raising pigs using the We Care℠ ethical principles and who wants to share his or her story of farming with the American public.

"Consistent with the National Pork Board's new strategic plan, we want to build consumer trust through on-farm transparency and accountability," said Dale Norton, National Pork Board president and producer from Bronson, Mich. "The focus is on environmental sustainability, along with animal welfare, production efficiency, the adoption of best practices and a commitment to continuous improvement."

Ethical Principles

- Produce safe food
- Protect and promote animal well-being
- Ensure practices to protect public health
- Provide a work environment that is safe
- Safeguard natural resources
- Contribute to a better quality of life in our communities

Celebrity Judge

To help build awareness and momentum for the new program and the We Care ethical principles at its core, the National Pork Board has teamed up with Iowa farmer and TV celebrity, Chris Soules.

And the Winner Is…

The winner will be announced in October during National Pork Month at a ceremony in a major U.S. city.

The winner will spend about 30 days total from Oct. 2015 to Sept. 2016 away from their farm telling their farm's story and speaking out on behalf of America's pork producers. The goal is to show consumers how responsible farmers do what's right for People, Pigs and the Planet. The winner will receive a $15,000 honorarium to help compensate for those days away from the farm.

He also will serve as a judge to help select the eventual winner of the new award.

The public will be engaged during the final judging process via the Pork Checkoff's social media outlets. Short video clips of the finalists will be displayed at americaspigfarmer.com, where people can vote for their favorite.

Apply Today

All U.S. producers are welcome to apply April 1 to May 15. More details are available at americaspigfarmer.com. If you have questions or need help, please contact us at: www.nepork.org

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In this issue of Pork Talk we would like to provide an update of research that has been presented by University of Nebraska graduate students and faculty at recent scientific meetings. Below you will find a list of the abstracts including authorship, research objective(s), and main conclusion(s). The experimental protocols of the animal-related research described below were reviewed and approved by the Institutional Animal Care and Use Committee of the University of Nebraska-Lincoln.

UNL RESEARCH UPDATES

The following were submitted by:
Dustin Loy, Assistant Professor
UNL Vet Diagnostic Center
jdloy@unl.edu or 402.472.8468

Histopathological and Immunohistochemical Characterization of Pigs Experimentally Infected with Porcine Deltacoronavirus

Meeting: Oral Presentation; 2015 American Association of Swine Veterinarians; Orlando, FL

UNL Graduate Student: S. Vitosh-Sillman (presenting author)

UNL Faculty: B. Brodersen, J. D. Loy, A. Doster, C. Topliff, and C. Kelling

Research objectives: 1) Develop a conventional pig challenge model for controlled experimental porcine deltacoronavirus (PDCoV) infection in neonatal pigs and to characterize the clinical course of disease, virus distribution in tissues, and histopathological lesions subsequent to PDCoV infection. 2) Archive a collection of experimentally derived and well-characterized samples for development and validation of diagnostic tests including immunohistochemistry, real-time polymerase chain reaction (PCR), and immunoassays for diagnostic use on serum and oral fluids.

Main Conclusion: PDCoV is capable of producing clinical diarrhea, mortality, and significant small intestinal lesions and in neonatal (2-3 day old) pigs in the absence of other etiologic agents. The primary sites of virus localization as determined by PCR and immunohistochemistry are the small intestine and mesenteric lymph nodes. In the study, diarrhea began at day two post-inoculation (PI) and extended until day 12 PI. The highest level of virus shedding in inoculated pigs as detected by fecal PCR occurred on day two PI, and the last day the pigs tested fecal PCR positive was day 21 PI. Supported by the National Pork Board (14-182) in collaboration with faculty at South Dakota State University and Kansas State University.

Mortality and Manure Management in a Farm-Level Biosecurity Plan for PEDV

Meeting: Oral Presentation; 2015 Waste-to-Worth: "Advancing Sustainability in Animal Agriculture" Conference; Seattle, WA

UNL Undergraduate Student: B. Brittenham

UNL Faculty: A.M. Schmidt (presenting author), J.D. Loy, C. Kelling, J. Galeota and K. Eskridge

USDA-ARS Co-authors: D. Miller and R. McGhee

Research objectives: This presentation provided an overview of two on-going research projects focused on (1) identifying the appropriate time-temperature combinations for the inactivation of the porcine epidemic diarrhea virus (PEDV) in compost material for development of thermal death time curves for PEDV in compost material; (2) validating the time-temperature combinations for inactivation of PEDV in mortality composting piles; (3) determining survivability of PEDV over time in two common soils treated with PEDV-positive swine slurry at two moisture regimes and in three climates; and (4) determining the survivability of PEDV in swine slurry following lime addition to maintain a pH of 12 of 1, 12 or 24 hours. Special emphasis on the role of manure and mortalities in a biosecurity plan.

Main Conclusions: Initial results indicate that lime added to swine slurry at one gram per liter is capable of raising manure pH to 12 and maintaining this pH for up to 24 h with a manure temperature increase of approximately 3 degrees C. A live pig bioassay will be conducted in late summer 2015 to determine (1) whether or not infectious virus remains in the lime-treated manure samples and (2) whether or not manure-amended soils sampled throughout the climate simulation period contain infectious PEDV. This data, along with composting project results, will help define effective biosecurity measures for controlling PEDV transmission within and among swine farms through practices to dispose of and utilize mortalities and manure. Supported by Nebraska Pork Producers/NPB (14-239 and 14-269).

The following were submitted by:

Amy Schmidt, Assistant Professor
Department of Biological Systems Engineering
aschmidt@unl.edu or 402.472.0877

Swine Manure Application Method Impact on Soil Arthropods

Meeting: Poster Presentation; 2015 Waste-to-Worth: "Advancing Sustainability in Animal Agriculture" Conference; Seattle, WA

UNL Graduate Student: N.R. Schuster (presenting author)

UNL Faculty: A.M. Schmidt and J.A. Peterson

Research Objective: Investigate the impact of swine manure slurry applied via injection or broadcast on soil arthropod abundance and diversity.

Main Conclusion: Initial results indicate that broadcast swine slurry application may have a more positive impact on the abundance of Arthropods greater than 5 cm in length while injection may improve the abundance of smaller Arthropods. Additionally, the abundance of soil mites, considered an indicator of good soil health, appear to be more prevalent in soils receiving manure via injection. Supported by the UNL Agricultural Research Division.

Manure Vs. Commercial Fertilizer: Can Soil and Crops Tell the Difference?

Meeting: Oral Presentation; 2014 Nebraska Manure Demonstration Day; Lexington, NE

UNL Faculty: A.M. Schmidt (presenting author)

Objective: Define the soil physical, chemical and biological properties that collectively impact "soil health" and summarize research identifying how manure and commercial fertilizer impact these soil properties.

Main Conclusions: Among the literature reviewed for this presentation, manure (raw or composted beef, swine, poultry, etc.) generally produced equal or greater crop yields, seed yields and fruit qualities than inorganic fertilizer treatments. Researchers recognize that, although crops cannot differentiate between fertilizer form (inorganic vs. organic) the impacts on soil physical, chemical and biological quality is notably improved by the use of manure and other organic fertilizer sources.

Alteration of the Pig Intestinal Microbiome When Vaccinated Against or Inoculated With Porcine Circovirus 2 Using MaAsLin

Meeting: Poster Presentation; 2015 Digestive Physiology in Pigs; Kliczkow, Poland

UNL Graduate Student: D.M. van Sambeek (presenting author)

UNL Faculty: S. Fernando, D.C. Ciobanu, P.S. Miller, and T.E. Burkey

Research Objective: To evaluate the effects of porcine circovirus 2 (PCV2) vaccination vs. inoculation on the intestinal microbiome of piglets.

Main Conclusions: 1) Using a multivariate statistical framework (MaAsLin) to find associations between clinical metadata and microbial community abundance, a total of 58 OTUs (operational taxonomic units; used to inferences with respect to the composition of the microbial community) were correlated with at least one phenotypic trait or fixed effect (e.g., body weight, time, PCV-status); 2) 15 out of the 58 OTUs were determined to be of the genus Prevotella; 3) The microbial community profile of piglets may be affected by PCV-status (vaccinated or inoculated). Supported by Nebraska Pork Producers/NPB (12-185).

The following were submitted by:

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Phillip S. Miller, Professor
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Novel Cecum Cannulated Pig Model to Investigate the Human Microbiota Through Inter Species Transfer of Gut Microbiota from Humans to Pigs

Meeting: Poster Presentation-Undergraduate Competition; 2015 Midwest American Society of Animal Science; Des Moines, IA

UNL Undergraduate Student: M.E. Kaiser (presenting author)

UNL Graduate Students: C.L. Anderson and N.D. Aluthge

UNL Faculty: T.E. Burkey, P.S. Miller, D.E. Hostetler, S.C. Fernando

Research Objectives: The main goal of this project was to develop a new cecum-cannulated humanized pig model through fecal transplants from humans to pigs to identify the signals of the microbiome that affects the obese phenotype.

Main Conclusions: 1) Germfree piglets receiving the human microbiota developed a donor like microbial community each similar to the respective obese or lean donor; 2) Comparison of the microbiotas of humans, germfree pig recipients of (obese, lean, and conventional), revealed that the microbiota of germfree piglets receiving human microbiota was more similar to human donor microbiota than conventionally raised pigs suggesting the establishment of a human gut flora within the pig; 3) The humanized pig model has potential to help understand structure function relationships of the human microbiome. With the cecum cannulation, longitudinal sampling can be performed at the site of microbial action allowing the investigation of microbial gene expression. This model will provide an opportunity to better understand how microbial gene expression effects host gene expression and in turn host physiology.

Can the Effects of Lactose on Nursery Pig Performance and Immune Parameters be Attributed to Glucose, Galactose, a Combination of Both, or Sucrose?

Meeting: Poster Presentation; 2015 Midwest American Society of Animal Science; Des Moines, IA

UNL Graduate Student: Y.S. Li (presenting author)

UNL Faculty: T.E. Burkey and P.S. Miller

Research Objectives: The objective of this research was to determine if lactose is effective as an energy substrate or benefits the immune system via the constituent monosaccharides.

Main Conclusions: 1) Overall, dietary treatments did not affect pig body weight, average daily gain, or feed efficiency; however, pigs fed glucose + galactose diet had greater average daily feed intake than pigs fed the lactose diet in Phases 1 and 2 and the average daily feed intake of pigs fed the sucrose diet was greater compared to pigs fed the lactose diet in Phase 2; 2) There were no interactive effects on circulating immune biomarkers (i.e., immunoglobulins or acute phase proteins); 3) When dietary lactose was substituted by the constituent monosaccharides (glucose and galactose), average daily feed intake was increased in nursery pigs, although serum immune parameters were not affected.

The following were submitted by:

Daniel C. Ciobanu, Associate Professor
Department of Animal Science
dciobanu@unl.edu or 402.472.8066

Variationin Time and Magnitude of Immune Response and Viremia in Experimental Challenges With Porcine Circovirus 2b

Publication: BMC Veterinary Research Dec 4;10 (1): 286

UNL Undergraduate Students: E.E. Jobman, S.Y. Barnes, and E.H. Davis

UNL Graduate Student: Engle T.B.

UNL Staff: T.W. Moural, A.M. McKnite, J.W. Bundy, and J.A. Galeota

UNL Faculty: T.E. Burkey, S.D. Kachman, and D.C. Ciobanu

University of Alberta faculty: G.S. Plastow

Research Objectives: The objective of this study was to evaluate variation in viral replication, immune response and growth across pigs (n = 974) from different crossbred lines using a PCV2b experimental infection of growing pigs challenged at an average of 43 days of age.

Main Conclusions: Molecular sources of these observed differences in viremia and immune response could provide a better understanding of the host factors that influence the development of PCVAD and lead to improved knowledge of swine immunity.

Genome-wide Analysis of the Differential Response to Experimental Challenges with Porcine Circovirus 2b

Oral Presentation and Proceedings Paper: 10th World Congress of Genetics Applied to Livestock Production, August 17-22, 2014, Vancouver, Canada

UNL Undergraduate Students: E.E. Jobman, S.Y. Barnes, and E.H. Davis

UNL Graduate Students: T.B. Engle, J.K. Tart, and T.P. Johnson

UNL Staff: T.W. Moural, A.M. McKnite, J.W. Bundy, J.A. Galeota, and J.K. Qiu

UNL Faculty: T.E. Burkey, S.D. Kachman, R.K. Johnson, and D.C. Ciobanu

University of Alberta Faculty: G.S. Plastow

Iowa State University Faculty: M.F. Rothschild

Research Objectives: The objective of this study was to analyze genetic sources of the variation in PCVAD susceptibility. A genome-wide association study including 56,433 SNPs uncovered two major SNPs that explain 11.5% (SSC12) and 2.8% (SSC7) respectively, of the genetic variation for viral load. These SNPs partially explained the negative correlations between viral load and ADG during challenge ($r = -0.36$, $P < 0.0001$).

Main Conclusions: The genetic variants identifies may influence the ability of the host to react and influence PCV2b replication and immune response and improve general animal health and welfare while reducing production costs.

Genomic Analysis of the Interaction Between Energy Intake and SNP Genotypes on Age at Puberty

Meeting: Poster Presentation, 2015 International Plant and Animal Genome Conference XIII; San Diego, CA

UNL Graduate Student: M.D. Trenhaile (presenting author)

UNL Faculty: S.D. Kachman, P.S. Miller, R.K. Johnson, and D.C. Ciobanu

Research Objectives: The primary goal of this project was to use genome-wide association analysis to identify interactions between energy consumption and DNA markers that impact age at puberty.

Main Conclusions: 1) Restricted energy intake positively affects sow fertility. 2) Diet and the genotype of a DNA marker in AVPR1A gene interact to affect reproductive performance. 3) Regions of the pig genome that interact with diet to influence age at puberty were identified. 4) These regions contain candidate genes involved in energy metabolism, nutrient absorption, and embryonic development, as well as genetic variants that have significant additive interaction effects on age at puberty.

Swine Leukocyte Antigen Class-II Region is Associated with Variation in Porcine Circovirus 2b Susceptibility

Meeting: Poster Presentation; 2015 Plant and Animal Genome Conference XIII; San Diego, CA

UNL Graduate Students: E.R. Tosky (presenting author) and T.B. Engle

UNL Undergraduate Students: E.H. Davis and S.A. Premaraj

UNL Faculty: S.D. Kachman and D.C. Ciobanu

University of Alberta Faculty: G.S. Plastow

Research Objective: To identify genetic sources of the observed variation in susceptibility to Porcine Circovirus 2 in experimentally infected populations as well as naturally infected herds.

Main Conclusions: A genome-wide association study identified a locus of significance near the Swine Leukocyte Antigen class-II (SLAII) region of chromosome 7. The favorable CC genotype was associated with lower viral load across the 4 week time period of infection, lower viremia at 21 28 days post infection and higher wk 3, wk 4 and overall ADG when compared to both the CT and TT genotypes. Targeted sequencing of genes in this region uncovered a high proportion of potential functional DNA polymorphisms with some having an effect on viral load in a subset of high and low viremic pigs. As SLAII's role in immune response is well demonstrated, some of the identified polymorphisms may have an affect on the ability of the host's immune system to respond to specific pathogens such as PCV2 or a broader role on immune response.

For more information about the projects described above or for more information about current research projects, please contact the submitting author(s).

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INDICATIONS:
Cattle: Enroflox 100 is indicated for the treatment of bovine respiratory disease (BRD) associated with *Mannheimia haemolytica, Pasteurella multocida* and *Histophilus somni* in beef and non-lactating dairy cattle.

Swine: Enroflox 100 is indicated for the treatment and control of swine respiratory disease (SRD) associated with *Actinobacillus pleuropneumoniae, Pasteurella multocida, Haemophilus parasuis* and *Streptococcus suis.*

Enroflox 100 is administered as a single dose for one day (swine) or for multiple days (cattle) of therapy.
Enroflox 100 is not approved for a one-day, single dose of therapy in cattle.

RESIDUE WARNINGS:
Cattle: Animals intended for human consumption must not be slaughtered within 28 days from the last treatment. This product is not approved for female dairy cattle 20 months of age or older, including dry dairy cows. Use in these cattle may cause drug residues in milk and/or in calves born to these cows. A withdrawal period has not been established for this product in pre-ruminating calves. Do not use in calves to be processed for veal.
Swine: Animals intended for human consumption must not be slaughtered within 5 days of receiving a single-injection dose.

HUMAN WARNINGS: For use in animals only. Keep out of the reach of children. Avoid contact with eyes. In case of contact, immediately flush eyes with copious amounts of water for 15 minutes. In case of dermal contact, wash skin with soap and water. Consult a physician if irritation persists following ocular or dermal exposures. Individuals with a history of hypersensitivity to quinolones should avoid this product. In humans, there is a risk of user photosensitization within a few hours after excessive exposure to quinolones. If excessive accidental exposure occurs, avoid direct sunlight.

PRECAUTIONS:
The effects of enrofloxacin on cattle or swine reproductive performance, pregnancy and lactation have not been adequately determined.
The long-term effects on articular joint cartilage have not been determined in pigs above market weight.
Subcutaneous injection can cause a transient local tissue reaction that may result in trim loss of edible tissue at slaughter.
Enroflox 100 contains different excipients than other enrofloxacin products. The safety and efficacy of this formulation in species other than cattle and swine have not been determined.
Quinolone-class drugs should be used with caution in animals with known or suspected Central Nervous System (CNS) disorders. In such animals, quinolones have, in rare instances, been associated with CNS stimulation which may lead to convulsive seizures. Quinolone-class drugs have been shown to produce erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species. See Animal Safety section for additional information.

ADVERSE REACTIONS: No adverse reactions were observed during clinical trials.

ANIMAL SAFETY:
In cattle safety studies, clinical signs of depression, incoordination and muscle fasciculation were observed in calves when doses of 15 or 25 mg/kg were administered for 10 to 15 days. Clinical signs of depression, inappetance and incoordination were observed when a dose of 50 mg/kg was administered for 3 days. An injection site study conducted in feeder calves demonstrated that the formulation may induce a transient reaction in the subcutaneous tissue and underlying muscle. In swine safety studies, incidental lameness of short duration was observed in all groups, including the saline-treated controls. Musculoskeletal stiffness was observed following the 15 and 25 mg/kg treatments with clinical signs appearing during the second week of treatment. Clinical signs of lameness improved after treatment ceased and most animals were clinically normal at necropsy. An injection site study conducted in pigs demonstrated that the formulation may induce a transient reaction in the subcutaneous tissue.

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NPPA Heads to Tails

Ribs & Bibs:

Nebraska's State Senators were guests at NPPA's annual Ribs and Bibs event. The Carnival-themed evening was an energetic mix of music, exceptionally good food, and lively dialogue. NPPA President Scott Spilker welcomed the Senators and did just a "bit" of lobbying. NPPA is watching the progress of LBs 106, 176 and 175 during the proceedings of the 104th Legislature.

Spring LAC:

NPPA Board of Directors, Russ Vering and Aaron Kavan, along with Leadership members Alan Stephens and Mike Wisnieski, were among the Nebraska Delegation that attended the National Pork Producers Council's (NPPC) Spring Legislative Action Conference held in Washington D.C. Also attending as part of the NPPC's Swine Veterinarian Public Policy Advocacy Program was Dr. Jess Waddell. The Spring and Fall LAC conferences are held to continue aggressively advocating for pork producers at the national level. The Nebraska Delegation also met with Nebraska's Congressional leaders.

Extra Mile Walk:

Nebraska's pork producers have once again joined forces with the Lincoln Public Schools and the Food Bank of Lincoln to help host the eighth annual BackPack Extra Mile Walk that took place on Saturday, April 11, 2015, at East High School. The National Pork Board Trailer was on hand and NPPA staff served sausage muffins to over 1000 walkers. This is the eighth year for this event. Last year walkers and supporters raised over $175,000 for our community's children.

Spilker & Ambassador Froman:

NPPA President Scott Spilker (left) joined other Nebraska Agricultural Leaders on April 8th at a round table discussion of foreign trade agreements with U.S. Trade Ambassador Michael Froman. The meeting was hosted by 2nd District Congressman Brad Ashford (D) Omaha.

TQA/PQA Training:

A GREAT BIG THANK YOU to Chris Delva, Assistant Hog Procurement Manager for Hormel; Rob Christine, Regional Relationship Manager for the National Pork Board; Paul Hay Gage County Extension Educator; and Larry Germer and Mark Klassen, Animal Handling Specialist for conducting PQA and TQA certification trainings across the State.

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High School Culinary Competition:

Four high school students under the instruction of Millie Beran won the Best of Pork, sponsored by the Nebraska Pork Producers Association, at the ICA High School Culinary Invitation. The completion was held at Metro Community College in Omaha on February 20th and 21st. The winning entrée was Jägerschnitzel with a Mushroom Sauce. Team members were Morgan Clarke, Ana Garcia, Corbin Smith and Austin Sckolovski.

Regional Producer Meetings:

Gold and Silver Industry Allied Members sponsored the Regional Producers Meetings held in Norfolk, Columbus and Beatrice. Guest speaker Dr. Larry Coleman spoke to more than 150 attendees about Increasing Employee Engagement and Group Housing and High Sow Productivity.

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Gearing up for Summer Programs

Raising Nebraska is gearing up for a jam-packed June full of summer programs and fun! Eight exciting, hands-on programs will have youth exploring the many aspects of agriculture. Programs include:

Program	Date	Time	Ages	Cost
Engineering Today	**June 3**	**10:00 a.m.–2:00 p.m.**	**10–18**	**$12.00**
Imagine yourself as an engineer for a day! Discover the ways engineers communicate with one another–then design, build, and test your team's inventions from everyday items!				
Animals–My Oh My!	**June 5**	**9:00 a.m.–Noon**	**8–18**	**$10.00**
What makes animals unique and special? Dissect and examine why livestock animals are different from you!				
Science in Your Shopping Cart	**June 10**	**9:00 a.m.–Noon**	**12–18**	**$15.00**
Learn about the science behind your food through experiments. Discover how enzymes work from making cheese to breaking down DNA. Walk away with a better understanding of biotechnology in relation to our food.				
Burritos from Nebraska?	**June 11**	**10 a.m.–1:00 p.m.**	**8–18**	**$10.00**
Discover how the ingredients and items to make your perfect burrito come from Nebraska agriculture! Then, for lunch, you will make a burrito to eat before you head home!				
Agriculture Through Sounds & Science	**June 16**	**1:00 p.m.–4:00 p.m.**	**8–18**	**$10.00**
Oink, Moo, Baa–animal sounds every child should know. But do they? Explore the world of agriculture through the sounds, science and products.				
Discover more about You!	**June 17**	**9:00 a.m.–Noon**	**10–18**	**$10.00**
Were you born to be a leader? Were you born to be an entrepreneur? Enjoy learning what makes you special–you may just be what the future of Nebraska agriculture is looking for!				
Best Genes in Town	**June 22**	**1:00 p.m.–4:00 p.m.**	**10–18**	**$10.00**
Ever wonder how genes are passed from one parent to the next? Enjoy an afternoon learning about traits in plants and animals and you will make your own new breed!				
Pollinator Pizza	**June 25**	**10:00 a.m.–2:00 p.m.**	**8–18**	**$12.00**
Ever wonder what your pizza would be like if there were no bees or insects? You will learn about where pizza ingredients come from, make your own pizza, and explore outdoors looking for those pollinators!				

Class size, time of program, and registration costs vary depending on the program. For a complete description of all workshops, please visit raisingnebraska.net

Register now and contact Beth Janning at 308.385.3967 or email raisingnebraska@unl.edu today! Payment to reserve your seat must be paid at least one week prior to program day.

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#WPX15

Thank you Allied Members for all of your support through the years and welcome to our new Allied Members. We are greatly appreciative of our members continuing to renew your membership and support of the Nebraska Pork Producers Association. We look forward to a successful 2015 with our new tiers of membership.

If you have any questions, please contact Sandra Kavan at sandra@nepork.org or at (402) 472-0493.

Allied Membership Program

Gold Level ($2,000)

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Bronze Level ($350)

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Check out our Allied Members list online at nepork.org under the Allied tab and click on Members for digital links to the companies' websites and email addresses.

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