Greetings!

Spring is here! As I have been driving through the countryside the past few weeks it is great to see spring field work is coming along nicely. Some of the earlier planted fields even have crops emerging already. Always a good site to see.

Topics covered in this edition of the Swine Extension Update Newsletter include: research spotlight on role of dietary fiber in diets for growing pigs - part 2, Pigs and High-Path Avian Influenza, Update on PRRS activity in MN, Midwest Farm Energy Conference details, recap of artificial insemination of sows workshop, and upcoming PQA Plus and TQA certification classes.

Please forward this email to other members of our swine industry that you feel would be interested, and/or they can email me with their request to be added to the newsletter distribution list.

Sarah Schieck
UMN Swine Extension Educator

UMN Swine Research Spotlight

The role of dietary fiber in diets for growing pigs - part 2
Zhimin Huang, Pedro Urriola, and Gerald Shurson

As inclusion of agriculture co-products that contain high fiber increases, optimizing nutritional efficiency has become a challenge, because there is large variation in energy and
nutrient digestibility between feed ingredients and even within sources of the same feed ingredient.

Fast, accurate, and inexpensive nutritional tools are needed to measure variability in nutrient digestibility among co-products and capture full feeding value of fibrous ingredients. These techniques require development, validation, and adjustment to fit swine feeding programs. Some of these fast and inexpensive tools rely on measuring in vitro (in the test tube) fermentation kinetics. However, there is no data on the use of in vitro gas production technique for prediction of the concentration of digestible energy and nutrients among sources of corn distillers dried grains with solubles. In addition, there is no data specifically comparing results from the test tube (in vitro) with results measured from feeding pigs (in vivo).

The objectives of the study was to: 1) develop, evaluate, and deliver nutritional tools for the measurement of in vivo energy and nutrient digestibility of different sources of 3 fibrous ingredients, and to 2) test fermentability kinetics differences of wheat straw, soybean hulls, and corn distillers dried grains with solubles. To read the entire article, visit the UMN Swine Extension website (www.extension.umn.edu/swine).

Pigs and High-Path Avian Influenza

Reprinted as posted on UMN Swine Disease Eradication Center website (www.cvm.umn.edu/sdrc)

Highly pathogenic avian influenza (HPAI) has recently been diagnosed in the US in Minnesota, Missouri, Arkansas, Oregon, Washington and Idaho. Birds in the affected flocks have experienced high mortality and measures have been put in place to quarantine and depopulate the affected flocks. Contact with wild birds is considered the most likely source of infection for domestic poultry.

Pigs are susceptible to infection with all influenza viruses, including HPAI. Pigs are usually sub-clinical and evidence of infection is usually only seen by serology. However, there are reports indicating that pigs can also develop the disease.

To date, there is no evidence that the new strains of HPAI (H5N2 or H5N8 subtypes) have infected pigs in the US. However, producers should be diligent about their biosecurity
practices. Avian influenza viruses are highly contagious, extremely variable and wide-spread in birds. Preventing introduction of birds into swine facilities, avoiding contact with wild birds and bird droppings in general, and avoiding non-chlorinated surface water should be emphasized.

Update on PRRS Activity in MN

The recent number of outbreaks of PRRS reported in the N212 region of Minnesota has broken the epidemic threshold. This is the only area in the Midwest experiencing outbreaks of this magnitude at this time. Eight unique PRRS viruses have been sequenced since last November and all but one of them appear to be unrelated to any previous area isolate.

Reminder for producers to be diligent about biosecurity practices. Additionally continually monitor herd health and work closely with your veterinarian to manage any health challenges, including PRRS. Remember to communicate with neighboring producers and others involved in your production flow to help minimize the spread of PRRS and other health challenges.

![Graph showing PRRS outbreak activity in N212 region from 2013 to 2015.]

N212 Rope Testing Surveillance Project

**Background:** The number of outbreaks of PRRS reported in the N212 region of Minnesota has broken the epidemic threshold, which has prompted the need for a renewed and ambitious response by producers and veterinarians. The N212 regional PRRS/PEDV elimination project will assist this effort by offering surveillance testing at no charge to participating producers.
**Purpose:** To update the PRRS status of sites in the N212 area and to characterize the infectious status of positive sites.

**Plan:** To invite participating producers with an unknown PRRS status to sample their herds with a rope test, freeze the samples and submit the oral fluid samples to one of several collection points. Samples will be forwarded to the U of Mn VDL for ELISA or PCR testing. The N212 project will cover the cost of rope collection kits and laboratory fees.

**Participation Criteria:**

- Producers must be a signed participant of the N212 project and willing to share status information.
- All sites must have a federal premises identification number included on the laboratory submission form.
- Any site with an unknown or questionable PRRS status is eligible.
- Samples must be collected and submitted by May 29, 2015 to be eligible for payment.
- Samples from non-vaccinated sites can be submitted for ELISA serology screening; positive samples will be tested using PCR and sequenced if possible.
- Samples from vaccinated sites should be collected prior to vaccination or at least 4 weeks post-vaccination and tested using PCR. Positive samples with a low Ct count will be sequenced.
- Since funds are still available from USDA for PEDV testing, producers are encouraged to test the same oral fluid samples for PEDV-PCR.
- On lab submission form, under "Bill to" Check "Other" and write "PRRS-N212 Project, PED-USDA"
  Include Dave Wright as Affiliate (Affiliate code: WRI.BELAC),
  email: wright2me.dave@gmail.com,
  fax: 763-682-2915

Available resources:

- [Minnesota Lab Submission Form](#) (it works best if this form is opened in Internet Explorer)
- [Oral Fluid Collection Instructions](#)
- [Rope Test Kits Distribution and Sample Collection Points](#)
Midwest Farm Energy Conference

Registration is open for the Midwest Farm Energy Conference, which will showcase optimized and cost-effective energy systems for swine, dairy, and crop production. The conference will be held at the West Central Research and Outreach Center (WCROC), Morris, MN, and will begin on Wednesday, June 17, 2015 with activities planned through Friday, June 19, 2015.

The conference will include:

- Energy usage in swine and dairy production systems
- Lowering energy consumption by reducing temperature of swine facilities
- Control strategies for swine and dairy facilities
- Opportunities for solar energy on farms
- Incentives, grants and loans for renewable and energy-efficient systems
- Integrating energy-efficient and renewable energy systems in Midwest diaries
- Keynote Speaker, Steve Peterson, Director of Sourcing Sustainability at General Mills
- Renewable energy tours


Recap of Artificial Insemination in Swine Workshop

April 10 - 11, 2015 a swine artificial insemination workshop took place at the UMN Southern Research and Outreach Center (SROC) in Waseca, MN. The first day of the workshop participants were in the classroom learning about various topics. Sam Baidoo, Swine Extension Specialist covered anatomy and physiology of the sow’s reproductive system and sow nutrition and management. Dean Compart, Compart’s Boar Store presented heat detection and insemination strategies and semen quality, handling and
storage. Hanneke Feitsma, DVM presented insemination techniques (both traditional and post cervical) and breeding herd disease management.

The second day offered hands-on experience for participants in SROC swine facilities. The morning started with Dean Compart talking about semen handling and storage. Participants were then split into two groups and rotated between two activities. Dean Compart and Dr. Hanneke Feitsma lead hands-on heat detection and artificial insemination of sows. Participants were able to practice both traditional and post-cervical AI techniques. Sam Baidoo and Sarah Schieck, Swine Extension Educator lead hands-on experience of evaluating body condition scoring of sows by visual appraisal, backfat measurements, and flank-to-flank measurements. Body condition scores were then used to recommend adjusted feeding levels for the sows.

Participants enjoyed learning new skills, perfecting already known skills and participating in great discussion on artificial insemination of sows.

Evening PQA Plus Certification to be Held

An evening PQA (Pork Quality Assurance) Plus certification training is planned for
June 24 in Northfield, MN

Time: 6 - 9 PM
Location: Saint Olaf College, Valhalla Room, 1520 St. Olaf Ave., Northfield, MN

Pre-registration is requested to Colleen at MN Pork Board at colleen@mnpork.com or call 1-800-537-7675.

PQA Plus and TQA Certification Classes
Coming Up

Are you current with your Pork Quality Assurance (PQA) Plus and/or Transport Quality Assurance (TQA) certification? Upcoming training and certification classes include the following dates:
- May 20 - Hutchinson, MN, McLeod County Fairgrounds-Commercial Building, 840 Century Ave.

PQA Plus certification is scheduled from 9am - noon and TQA from 1pm - 4pm at all locations. For more information or to register for a course, go to www.mnpork.com to view PQA Plus and TQA certification schedule, or contact Colleen at MN Pork Board at colleen@mnpork.com or call 1-800-537-7675.

Recertify for PQA Plus and TQA Online

You can now recertify for PQA Plus and TQA online. In order to do this, you must have been certified previously in the program you need recertification in AND your certification in the program must still be current.

To recertify online, contact, Sarah Schieck, UMN Swine Extension Educator - schi0466@umn.edu or (320)235-0726 x2004 or another PQA Plus Advisor or TQA Advisor to get access to the online recertification course. For TQA recertification, online recertification can only be done every other time you recertify.

Contact Us

It is our goal to bring University research to the Minnesota Pork Industry, ensuring the continued sustainability and competitiveness of producers and allied industry. You will find a list of UMN Swine Extension team members and their contact information on our website (www.extension.umn.edu/swine). Please email or call if I can be of assistance. Sarah Schieck, UMN Swine Extension Educator - schi0466@umn.edu or (320) 235-0726, ext. 2004.

Upcoming Events Calendar
May 2015
May 6 - SowBridge program - "Five things you wanted to know about pen gestation but were afraid to ask"
May 20 - PQA Plus/TQA certification, Hutchinson, MN
May 29 - Porkbridge program - "Effective Procedures for Cleaning Up After PED, PRRS, etc."

June 2015
June 3 - 5 - World Pork Expo, Des Moines, IA
June 10 - SowBridge program - "Temperature Management for Sows & Piglets"
June 10 - PQA Plus/TQA certification, Mankato, MN
June 17-19 - Midwest Farm Energy Conference, Morris, MN
June 24 - PQA Plus/TQA certification, Northfield, MN - EVENING SESSION

July 2015
July 1 - SowBridge program - "Common Mistakes that Hurt Production Performance"
July 22 - PQA Plus/TQA certification, Marshall, MN