

Sapovirus: what we have learned so far

- Chris Deegan, DVM

As our diagnostic capabilities continue to improve, so does our knowledge of the viruses and bacteria that are affecting our pigs. One virus we are quickly learning more and more about is porcine sapovirus.

Clinical picture:

Sapovirus causes a gastroenteritis with the main clinical sign being diarrhea, and similar to other diarrhea causing pathogens, it leads to an increase in fallout pigs. The scour ranges in appearance but it is most frequently seen as a pasty yellow to grey stool, very similar to a coccidia scour. Sapovirus appears to only affect young pigs, having been diagnosed in pigs that are a few days old in the farrowing crates all the way up to a few weeks placed in the nursery. Co-infections with rotavirus can be found frequently and unsurprisingly increase the severity of the clinical disease.

Diagnosing the issue:

Finding the virus can be done via PCR on fecal samples or rectal swabs and histological lesions like villus blunting can be seen on tissues. Once the virus is found, it is important to do further characterization with whole genome sequencing or genotyping to see which virus is affecting your herd and to better match a potential vaccine to give you the best protection.

Another important part of determining if the virus is creating an issue in your herd is to rule out or correct other issues that could be creating a similar issue. Ruling out and/or making adjustments for coccidia and rotavirus control will help to not only improve overall pig quality but also help to determine if sapovirus is playing a major role in your scour issue.

Control and treatment:

Unfortunately, since this is a virus we are dealing with, there is no miracle drug to cure it if your pigs are being clinically affected. Like most scour issues, we have found that nutritional support through electrolytes in the water and gruel feeding the pigs can improve the performance of your pigs as they get through the course of the disease.

To help control over the virus, the best option we have found is vaccinating sows pre-farrow. Our clinic has several instances of vaccinating a sow herd pre-farrow creating a very measurable benefit in pig quality during lactation and post-weaning through decreased PWM, decreased treatments, and increased wean weights. Other types of scour control like feedback to sows pre-farrow has proven to be ineffective at controlling the virus.

At this point, we do not know much about the transmission of the virus and how it is being introduced to herds. We have recently diagnosed sapovirus in several herds that have been closed and internally multiplying for upwards of 4 years. This has posed several questions going forward on whether there is potential for zoonotic transmission occurring or if the virus has become more severe in recent years sparking further investigation into it.

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Our Philosophy

To provide our clients with the highest professional service.

To achieve this we invest in our employees and instill in each of them a strong sense of customer service and commitment. We believe this personal relationship allows us to work with our clients to the best of our abilities, and is the foundation of Suidae Health and Production.

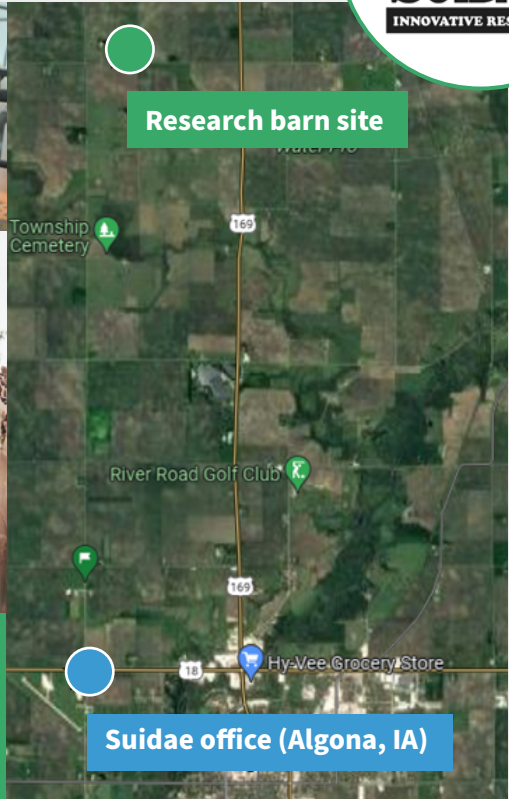
Suidae Innovation Station

COMING FALL 2023!



Featuring:

- ✓ 2400 head wean-to-finish research barn
- ✓ Positive pressured
- ✓ 4 rooms with separate air spaces
 - Options to utilize 1, 2, 3 or all 4 rooms!
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 - Up to 192 pens!
- ✓ Big Dutchman feed system
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- ✓ Customizable trial options!
- ✓ Starting to book trials for Q1 2024!



Call or email Dr. Brandi Burton for more information!

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Ringneck Open House

“Suidae Health and Production, along with Topigs Norsvin and Premier Ag Systems, recently hosted an open house for Ringneck, a new state-of-the-art, pen gestated sow farm facility in North Central Iowa. Ringneck was designed by Suidae as a positive pressure, filtered, breed- to-wean farm housing around 6,500 breeding animals. The event drew around 500 visitors who had the opportunity to tour the facility and enjoy a pork lunch. Suidae is privileged with providing the management and vet services for the farm and we look forward to a successful venture. Breeding animals will begin arriving at the site at the end of April. Thank you to everyone who came to visit!”

Ringneck

- 3,360 PIGS PER WEEK**
1,000 piglets, weighing 12 lbs, bounds on average, will be weaned 3 times per week.
- 306,000 LBS OF FEED**
Gestating sows will eat about 90 tons of feed weekly, with another 42 tons consumed by lactating sows. Gilts will need an additional 21 tons each week.
- 678 DOSES OF SEMEN**
Nearly 700 doses of 6000 sperm will be delivered to the sow each week, with a goal of 200 times of piglets born per 3 weeks of farrowing season.
- 73 REPLACEMENT GILTS**
After the farm is fully stocked, it will need 375 replacement gilts per year (210 gilts per week). A new group of gilts will join the farm every 14 weeks.
- 6,200 SOWS AND GILTS ARE HOUSED IN...**
 - 1,000 Farrowing maternity stalls
 - 2,500 farrowing barn cages
 - 3,150 Gestation pen spaces
 - 1,600 gilt development spaces
 - 1,200 Nursery holding spaces
- POSITIVE PRESSURE FILTRATION**
Ringneck was designed with biosecurity as a top priority. The facility is equipped with filters to remove pathogens from the air that pigs will breathe. Fans force air into the barn, resulting in air moving out of all other outlets and openings.
- THE FARM WILL PROVIDE JOBS FOR 20 FULL TIME EMPLOYEES.**
3-2 member animal program \$6.5K annual production cost

WWW.SUIDAEHP.COM

Fun Facts



One of the filter bank rooms that filter air coming into the facility

AASV Annual Meeting Recap:

The 54th American Association of Swine Veterinarians (AASV) annual meeting was recently held in Aurora, Colorado. The theme of this year's meeting was "Be There", and most of the Suidae vet group was "There" to learn and grow as swine veterinarians. The continuing education opportunities offered at these meetings are cutting edge. It's also a great opportunity for our group to present on various topics.

Meeting Highlights:

2022 Suidae interns Carly Bates and Mallory Wilhelm were 2 of 15 veterinary students from across the country selected to give oral presentations on their summer projects. Carly finished in the top 5 and was awarded \$2,500 for her presentation, "Evaluation of grueling protocols on nursery pig performance and survivability". Mallory finished in the 11-15 group and was awarded \$500 for her presentation, "Evaluation of PRRSV maternal antibody interference in commercial wean pig populations using a PRRS modified live virus vaccine".

Great job Carly and Mallory!



Dr. Brandi Burton, gave a presentation titled "Biosecurity: Why do we do it and who do we do it for?"

In this talk, Dr. Burton challenges some of the biosecurity "norms" in the swine industry today and discusses how there are multiple ways to create biosecurity solutions. A post presentation interview can be found at https://feedstuffs365.vhx.tv/videos/biosecurity-why-do-we-do-it-and-who-do-we-do-it-for?NL=NHF-001&Issue=NHF-001_20230302_NHF-001_874&sfvc4enews=42&cl=article_8_b or by scanning the QR code.



Employee Spotlight

Sharon Eastvold

I grew up on a small farm in southwestern Wisconsin, 5 miles from the Illinois border and 42 miles from Dubuque roughly. It's not the tundra you see when you watch Packer games. It's more like they get a balmy 55 while we get 6 inches of snow here kind of weather. Being from WI, I did root for the Packers, cheese and whole milk is still a large part of my diet, and I was around a lot of dairy cattle; I milked cows for the neighbors and worked on a heifer grower farm through high school. I went to college at Iowa State and studied Animal Science and Agronomy. After graduation I went into the Seed Industry and worked in R&D for multiple companies for almost 14 years. I have been at Suida for just over a year as the Lab Manager in Algona. A large part of what I do is produce the farm-specific vaccines we provide for some of our clients. Along with managing all the items that go into the production of those vaccines and running the lab.



My husband and I have 3 little girls, Evalyn (5), Norah (3), and Naomie (1), 1 dog, and 12 hens. The dog is a girl too, so my husband is vastly outnumbered. My hobbies lately are my girls. Evie started preschool and dance this last year and Norah will start next year so we will get busier with all their activities.

I love to garden and do a lot of canning, whether you call that a hobby or more work I am not sure yet. We might end up with a small hobby farm someday if I keep convincing my husband we need more livestock. He built us a chicken coop last year because I said we needed laying hens for the girls to take care of. This year I have him convinced we need to seed some pasture and put up a fence because the girls need goats.

FUN FACT!

I was on the Dairy Science Club intermural hockey team in college. I was the permanent goalie for the team, not because I was amazing at it but because I couldn't skate. I was able to slowly make it to the nets and back to the bench each game at least. We were champs one year and ended up with an intermural shirt which I am sure I still have.

Smoked Pork Tenderloin

Spring has arrived and it's a great time to fire up your smoker and cook some pork. Try this smoked pork tenderloin recipe and enjoy the sweet and savory flavors.

Ingredients:

- 1/2 Cup apple juice
- 3 Tablespoon honey, warmed
- 3 Tablespoon of your favorite pork seasoning
- 1/4 Cup brown sugar
- 2 Tablespoon fresh thyme leaves
- 1/2 Tablespoon Black pepper
- 2 (1-1/2 lb) pork tenderloins, silverskin removed

Cooking Directions:

1. In a large bowl, whisk together the apple juice, honey, pork seasoning, brown sugar, thyme, and black pepper.
2. Add the pork loins to the bowl with the marinade. Turn the pork to coat. Cover the bowl with plastic wrap and transfer to the refrigerator and marinate for 2-3 hours.
3. When ready to cook, set the smoker temperature to 225 and preheat with the lid closed for 15 minutes.
4. Insert the probe into the center of a tenderloin. Place the tenderloins directly on the grates, close the lid, and smoke until the internal temperature reaches 145, 2.5-3 hours.
5. Remove the tenderloins from the grill and let rest for 5 minutes before slicing. Enjoy!
4. Sprinkle the sugar mixture over the bacon slices, fully coating all of the slices on both sides. Using your hands, gently pat the sugar down onto the slices of bacon.
5. Bake for ~30 minutes or until brown and crispy. Remove from oven and let cool for 10 minutes.
6. Carefully transfer the bacon from the baking sheet pan to a cooling rack and let cool for another 10 minutes.

PORK RECIPE



This recipe and more can be found at <https://www.traeger.com/recipes/smoked-pork-tenderloins>.