



A Behind the Scenes Look at PRRS Monitoring at Suidae

Disease Bioportal is a web-based system that provides real-time or near-real time access to local, regional, and global disease information and data. The Disease BioPortal is operated and maintained by the Center for Animal Diseaes Modeling and surveillance at the University of California, Davis and supported by a consortiaum of national and international institutions, agencies and organizations.

Phylogenetic Tree

At Suidae we use Disease Bioportal to track PRRS outbreaks using mapping and spatio-temporal displays, graphics, and phylogenetic analysis of data. Currently, Suidae has a database including 134 sites and 323 PRRS sequences! This growing database allows us to follow trends over time as well as help compare sequences to all other cases in the database during an outbreak. We can also take sequences from other veterinarians and add it to our database to help make connections during an outbreak investigation. A few of the features of Bioportal are highlighted below.

This phylogenetic tree shows all of the cases in the database from 2018-2020. The different colors represent various clusters based off of genetic similarities, which most of the time relates to RFLP (i.e. 1-7-4, 1-3-2, etc.). With this tool we can evaluate how PRRS strains in our database are evolving and grouping and whether or no there are any similarities with other strains.

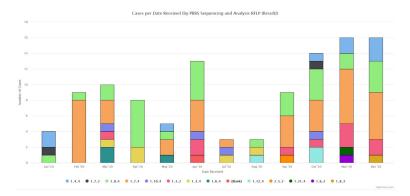


Chart 2. Looking at 2020 specifically, this chart shows us that June had a spike of cases which is abnormal for that time of year. November and December spikes mirror what other PRRS databases are reporting. According to the Swine Health Information Center's database, the overall PRRSV-percentage of positive cases was above 3 standard deviations from state-specific baselines in MN, SD, IA, NE, MO, and IN at the end of 2020.

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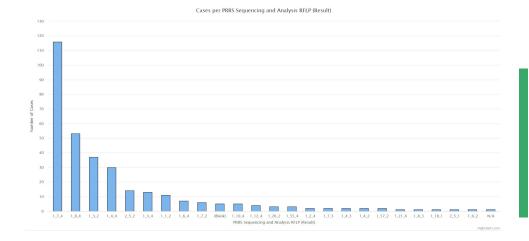


Chart 3. Another chart looking at PRRS in 2020 specifically. This is number of cases by RFLP, and the number one RFLP sequenced in 2020 was 1-7-4. From there, 1-8-4, 1-3-2, and 1-4-4 follow behind respectively. There is a very virulent 1-4-4 that has been associated with a large number of breaks in the Midwest. This RFLP will be one to watch in 2021.

These are just a few of the features Disease BioPortal provides us. Stay tuned for yearly updates looking at disease trends! **Ask your Suidae veterinarian how this program can help you!**

The Scoop on AgView

If you keep up with industry news you have likely seen advertisements or promotional materials for a program called AgView. Drs. Stricker and Burton recently participated in a live demo with the programmers where they learned more about the program and how it would function for Suidae clients.

In a nut shell, AgView is a new software-based technology with the ability to provide real-time health and movement status to help the U.S. pork industry in the event of a foreign animal disease (FAD) outbreak. The program is voluntary and is supported by the National Pork Board and funded by the Pork Checkoff making it no direct cost to participants.

Producers who are interested can register and enter all premise information, upload Secure Pork Supply plans, and enter pig movement and health status updates pertaining to their operation. With permission by producer-users, Agivew can provide access to this information to state animal health officials and others to aid in the response to suspected or confirmed FAD outbreaks. With widespread participation it will help the pork industry contain or regionalize FAD outbreaks to restore safe pork exports and regain business continuity quicker.

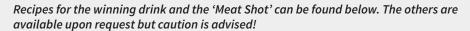
The program appears to be pretty intuitive to users but lacks the ability to link a herd vet to a producer's account. We feel this is an important feature as we believe our clients will be looking to their herd veterinarians to help navigate them through the crisis a FAD would present. We have shared our concerns with the programmers and they are going to look into adding this as a feature.

Producers can register at any time for an account by visiting manage.agview.com. We recommend if you are interested that you contact your veterinarian to discuss. In addition, if you haven't already done so, consider contacting your veterinarian to help you with developing your Secure Pork Supply plans so you can do your part to prepare your operation.



Bacon Inspired Challenge

Suidae veterinarians recently participated in a challenge to come up with a signature bacon inspired drink for the holidays. Each entry was judged on presentation, taste and creativity. Entries included the bacon vodka inspired 'Classic White Gilt', a peanut butter-bacon infused rye whiskey named the 'Big Fat Elvis', a Bloody Mary inspired 'Bloody Barrow', the bacon smoothie rum-based 'Cubic Rota', Hamm's nicknamed 'The OG' and a spin on an appetizer called the 'Meat Shot'. The competition was intense but ultimately Dr. Schwartz and his Baconator Old Fashioned, complete with homemade bacon straws, stole the show. Dr. Schwartz was awarded with a trophy and a spot in the Suidae newsletter for his efforts.







Baconator Old Fashioned:

Ingredients:

1 ½ parts Knob Creek® Smoked Maple Bourbon 3 tsp brown sugar simple syrup 3 dashes of orange bitters orange peel

1 brown sugar bacon straw

In a cocktail shaker add simple syrup, bitters and ice .Proceed to shake until well mixed. Pour the mixture into a low ball glass with fresh ice. Add bourbon and stir. Garnish with a bacon straw and orange peel.



Brown Sugar Bacon Straws:

Ingredients:

Bacon (Medium thickness works best) Brown sugar

Preheat oven to 375 F. Cut strips of bacon in half and sprinkle brown sugar on each side. Wrap the bacon along the length of a pre-soaked wooden kabob. Place on a wire rack over a lined baking sheet and cook about 15 minutes or until desired "crispy-ness". Cool and refrigerate until use.



Meat Shots:

Ingredients:

1 package smoked sausage

Filling:

1/4 block cream cheese softened
2 green onions, chopped
4 strips thick-cut bacon, minced
4 small breakfast sausage patties
cooked and crumbled
1 Tsp chili powder
1 Tbsp sweet BBQ rub
1/4 cup shredded cheese

Slice the smoked sausages into 1/2 inch sections. Slice the bacon in half, and then wrap each sausage with the bacon, forming a bowl on top of the sausage. Use a toothpick or skewer to hold the bacon in place. Combine the rest of the ingredients in a bowl and then using a small cookie scoop, fill the bacon shot glasses with the cheese filling. Place the meat shots in a 9x13 inch baking dish and cook at 350F for 30 minutes.



Employee Spotlight

Meet Brad Giles,

Suidae's Director of Sow Production

Originally from Creston, IA Brad started out his career as a herdsperson in a sow farm and advanced to the assistant manager of a 6000 sow farm managed by Suidae. In 2014 Brad was promoted to Unit Manager for a 2400 breed-to-wean farm in NE, IA. In 2017 Brad was asked to join Suidae's management team as a Sow Supervisor where he oversaw the management of several sow farms throughout IA and MN and was again promoted in 2020 to Director of Sow Production.

As Director of Sow Production Brad now oversees the sow management team providing turn-key management services to roughly 20,000 sows, and growing, in IA, MN and ND. Brad, his wife Sasha and their three children reside in St. Ansgar, IA. Brad brings over 20 years of experience in sow production and his drive and passion for the industry is evidenced by the success he and his team have brought to the farms under Suidae's management.

Suidae Partners with LeeO™:

First commercial sow farm to fully implement the technology in the U.S.

Suidae is just rounding out the first year of partnering with LeeO™ to implement the LeeO™ technology in a 2400 commercial farrow-to-finish operation in northwest Iowa. LeeO™ is an individual animal tracking system designed for paperless data collection in "real time" in the commercial pork supply chain. Utilizing a radio frequency identification (RFID), LeeO™ scans tags and records individual animal weights and other key data quickly using a proprietary LeeO™ Reader and blue tooth technology that links to an app that can be downloaded on handheld devices.

Some examples of key data being recorded at the sow farm on individual pigs include birth and wean weights, sex, genetics, treatments, clinical disease signs, assistance at birth, cross-fostering status and split-suckling status. Post-weaning the technology is used to scan each individual mortality, track physical defects like scrotal and abdominal hernias and evaluate market weights on an individual pig basis.

In the first 12 months of using this technology over 70,000 piglet births, 65,000 birth weights, 55,000 wean weights, 13,000 mortalities, and 12,000 sow services have been recorded and registered into LeeO $^{\rm TM}$. Individual data collection is possible due to the high LeeO $^{\rm TM}$ tag retention which is greater than 99% from birth to wean and greater than 98% through late finishing. Data mining is on-going and has been used to identify trends and evaluate management changes on a real-time basis.





The graph above represents the birth weights and subsequent mortalities from this farm. As you can see below, those pigs weighing less than 2 lbs at birth have a much higher prewean mortality rate than their heavier cohorts. Based upon this finding the farm has initiated humane euthanasia of all piglets born under 2lbs with the intent to give the remaining bigger piglets, who are more likely to survive, a better start early in life while on the sow. As a result, wean weights have increased greater than 0.5 lbs and nursery mortality rate has been reduced.

Stay tuned, more data from this farm will be presented in future newsletters as Suidae continues its partnership with LeeO™ in 2021.