



African Swine Fever U.S. and Global Update

ASF Preparation in the US

Until the distraction of COVID-19 and plant closures, African Swine Fever (ASF) was at the forefront of our minds in the swine industry. In September 2019, the USDA along with 14 states participated in an ASF Functional Exercise. The purpose of this exercise was to “play out” the actions necessary to take in the face of an ASF outbreak in the US. Each state had designated sites and systems that “played” as if they were seeing clinical signs and from there, all aspects of an actual Foreign Animal Disease outbreak investigation was played out. For the 4 days of the exercise, Drs. Stricker and Burton had the opportunity to sit in with the Iowa state officials as they played through this exercise and provide feedback as swine veterinarians in the industry.

6 months after that exercise, COVID-19 caused plant closures all over the country, and the swine industry found itself living through some of the very topics that were discussed during the ASF Functional Exercise, specifically regarding mass depopulation and disposal. The industry also got a taste of limit feeding and holding diets, something no one in the industry probably would have ever imagined. Since the chaos of 2020, there have been major

health challenges seen throughout the industry. PEDV and PRRSV have run rampant through many parts of the mid-west with the most notable being the notorious 1-4-4 PRRS strain found in many systems throughout southern Minnesota and northern Iowa. These health challenges following unprecedented times in the industry highlight the importance of biosecurity and builds a case for why producers should start taking the steps to increase their efforts in this area. Biosecurity efforts becomes even more important when you start to think of it as proactive steps in ASF control.

A simple way to start increasing your system's biosecurity efforts is through Secure Pork Supply (SPS) Enhanced Biosecurity Plans. Not only is this an essential tool for obtaining a movement permit and ensuring business continuity in the face of ASF, but it can also help your system now by decreasing the pressure of endemic pathogens such as PRRS and PED. If you are interested in getting your sites or system set up with SPS plans, Suidae can help make it a simple and easy process. Reach out to your veterinarian to ask how!



ASF Global Update

September 10, 2020 ASF was diagnosed in a single feral pig in Germany. Even though this had a positive impact on the US lean hog market, it put into perspective how costly one single diagnosis of ASF could be for the agricultural economy.



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Dr. Chris Deegan

Today, most of the new outbreaks that are reported are in backyard herds or feral pig populations, but there are still several countries experiencing high death loss and new cases. The most updated information can be found on the OIE, World Organization for Animal Health, website. The maps here are taken from the most recent OIE update Feb 05-Feb 18, 2021. This article states there are 25 countries/territories with new or ongoing outbreaks - 9 in Europe, 12 in Asia, and 5 in Africa with over 166,000 head lost in Asia alone during this time period.

On March 16, 2021, an article was released by the USDA outlining an agreement between the USDA's Plant Health Inspection Service (APHIS) and the Canadian Food Inspection Agency (CFIA) regarding a protocol to ensure bilateral trade if ASF was detected in feral swine (NOT domestic/commercial swine) in either country. This protocol would initially halt trade between countries, but there would be three progressive phases shortly following.

The goal of this agreement and establishment of a protocol will protect the swine herds in each country while also minimizing the economic impact it would have on the swine industry.

1. Spatial distribution

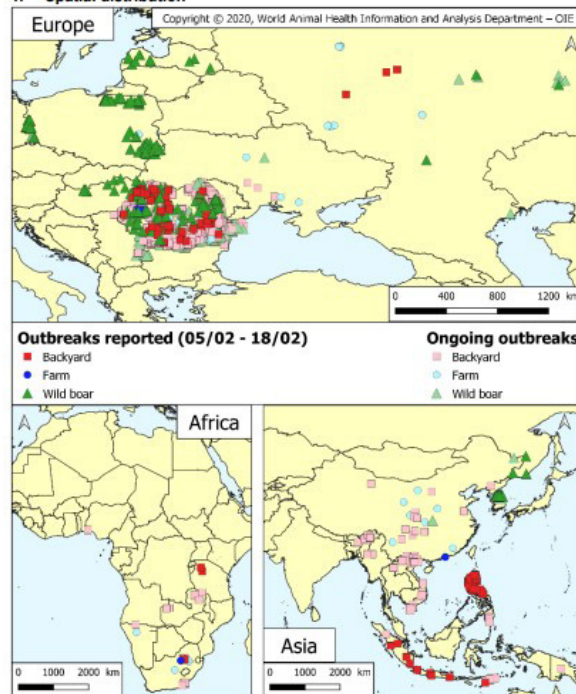


Figure 1. ASF outbreaks reported through the Early Warning system within the period. The outbreaks notified between February 05 to February 18 pointed with a higher color intensity compared to the ongoing outbreaks (lighter colors).

2021 52nd American Association of Swine Veterinarians (AASV) Annual Meeting held virtually

Originally planned for San Francisco, CA the annual AASV meeting was moved to virtual platform this year due to Covid-19. This year's theme was 'Navigating the Future...Together'.

Presentations contributed by Suidaehp at this year's meeting included:

Brandi Burton, DVM- Suidaehp Health and Production

- LeeO individual animal data system implementation in a commercial sow farm
- Determining the minimum infectious dose of Mycoplasma hyopneumoniae using diluted pooled tracheal sample fluid as an inoculum administered intratracheally

Amanda Anderson, 2020 Suidaehp veterinary student intern Iowa State University

- Determination of porcine sapovirus prevalence and clinical correlation in suckling pigs

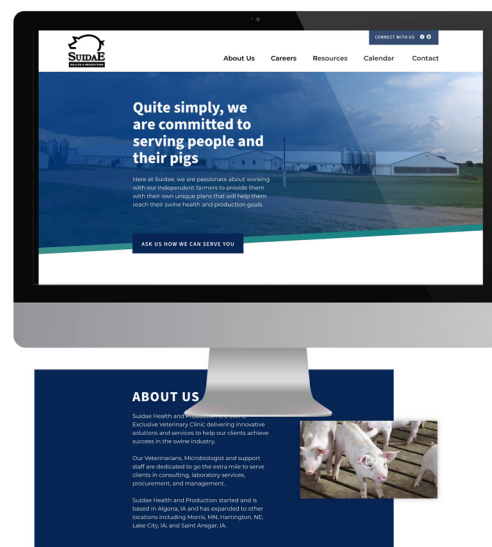
Anthony Holowka, 2020 Suidaehp veterinary student intern Lincoln Memorial University

- Effects of fecal microbiota transplant on performance and fecal microbiota in weaned pigs when administered through a water medicator.

Website updated!

We have a new and improved website!

Check it out at Suidaehp.com.



OUR SERVICES



Herd Health Consulting and Visits

- Herd Health Protocol development and implementation
- Filtration system design, operation, training, auditing
- Bio security risk assessments, audits of farms, swine, feedmills, etc.
- Disease eradication

In-House Laboratory Services

- To help speed up the time for diagnostics to be returned, services to be known and to be very reactive to incoming farm specific diagnostic requests

Management

- All aspects can be managed for you swine operation from full management of financials, employees, production or can have an individual plan created. Our goal is to manage the production to make help the producer become more efficient with their time and resources.

Pork Belly Burnt Ends

Created by Chef Tim McCarty at the 2019 Minnesota Pork Board Taste of Elegance

Ingredients:

1 (2-lb) single-rib pork belly	2 Tbsp cracked pepper
6 oz Jim Beam Vanilla Bourbon	2 Tbsp raw sugar
½ cup honey	4 cloves garlic, minced
2 Tbsp sea salt	2 vanilla beans, seeds removed

Trim pork belly; score fat into diamond shapes. Combine remaining ingredients in bowl; mix well. Brush pork belly with half of bourbon mixture. Smoke at 225°F for 3 1/2 hours. Wrap in parchment paper, then aluminum foil. Return to smoker; smoke 1 1/2 hours or until heat probe slides in easily. Remove from heat; cool. Cut into 1" cubes; brush with more bourbon mixture. Cook pork belly in hot cast-iron skillet, browning all sides and continuing to brush with bourbon mixture until sticky and tasty.



Employee Spotlight

Chris Deegan,

Having grown up in St. Paul, MN, Chris has a unique path into the swine industry. He originally started undergrad at the U of MN studying Fisheries and Wildlife, but decided to switch to Animal Science during his first year of undergrad, with the hopes of continuing into veterinary school. His interest in production animals started after he switched to animal science and started taking classes on livestock management and gaining experiences working with them. Once Chris started Vet school in 2014, he quickly took an interest in Swine medicine and started working with one of his professors, Dr. Pieters, on M. hyopneumoniae research. Throughout vet school, he continued to gain experience in swine production and medicine through summer internships and externships. After graduating vet school in May 2018, He immediately began his career with Suida based out of their Morris office.

Chris currently lives in Sauk Centre, MN with his wife, Tasha, and 6 month old daughter Brooklynn along with a handful of pets to keep them busy. In his free time, Chris enjoys hunting, fishing and smoking meats.



In his time with Suida, a large portion of Chris' work has been focused on multiplication, gilt development and disease prevention.

Research Update



Using LeeO™ in on-farm research and investigations

Group	Average of Birth Weight (lbs)	Average of Weaning Weight (lbs)	Average of Mother's Parity	Average Pre-Wean Mortality (%)	Number of piglets enrolled
Treatment 1	3.28	14.25	3.45	20.44%	9644
Treatment 2	3.31	14.25	3.48	19.50%	9065
Grand Total	3.30	14.25	3.47	19.99%	18709

Table 1.

This article is a continuation of an article published in the previous newsletter titled *Suidae Partners with LeeO™: First commercial sow farm to fully implement the technology in the U.S.* 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.

One of the added values of using a system such as LeeO™ is the ability to collect an immense amount of data on farm in real-time. Therefore, we utilized LeeO™ to conduct on-farm research. In an effort to further reduce piglet deaths in farrowing, differences between two day-1 treatment options were evaluated. Using LeeO™, sows were randomly allocated and blocked for parity in the farrowing house and assigned to either treatment group 1 or 2. Piglet births, birth weights, mortalities and wean weights were collected and recorded with LeeO™. After 14 weeks and over 18,000 piglets enrolled, the data was analyzed to determine whether there were any performance differences in preweaning mortality or wean weights between the two

treatment groups. Results in Table 1 verify successful allocation to treatment with similar parities and birth weights between treatment groups. Evaluation of the data suggested no difference between treatment group allowing the farm to select the most economic treatment option.

At this same farm, the production supervisor called in to question whether or not the ventilation settings in the farrowing rooms were leading to an increase in drafting on one side of the room vs the opposite side. Being that farrowing room crates are tracked in LeeO™, we were able to retrospectively pull data to look at pre-wean mortality based off crate locations and rooms. The figures below were created using this data. As charted below there was a notable difference in preweaning mortality between the two sides. Inlets were adjusted in response and preweaning mortality will continue to be monitored to measure the outcome of this management change.

Figures 2 and 3 are further examples of how the data can be organized to evaluate preweaning mortality differences between farrowing rooms or sections of rooms.

Crate #	PWM %	Rank	Rank	PWM %	Crate #
15	18.69%	20	3	23.87%	16
14	20.85%	8	18	19.16%	17
13	23.92%	2	17	19.24%	18
12	19.77%	12	9	20.85%	19
11	19.63%	14	28	16.97%	20
10	12.17%	30	23	18.43%	21
9	17.75%	24	6	21.97%	22
8	19.97%	11	7	20.89%	23
7	18.52%	22	13	19.68%	24
6	19.52%	15	25	17.54%	25
5	15.81%	29	5	22.07%	26
4	17.45%	26	10	20.66%	27
3	18.58%	21	1	26.57%	28
2	17.44%	27	19	18.89%	29
1	19.46%	16	4	23.85%	30

Figure 1. An evaluation of PWM based off crate number in all the farrowing rooms. The layout above mimics the layout of the farrowing rooms.

Room #	PWM %
1	19.03%
2	19.10%
3	22.47%
4	22.48%
5	20.42%
6	20.07%
7	16.75%
8	18.75%
9	18.99%
10	22.03%
11	18.51%
12	16.19%
13	19.25%
14	20.82%

Figure 2. PWM based off of farrowing room.

Section	PWM %	PWM%	Section
11-15	0.205966	0.200745	16-20
6-10	0.176283	0.19774	21-25
1-5	0.177792	0.224256	26-30

Figure 3. Looking at PWM based off “sections” if we were to split up the different regions within the farrowing room.