



African Swine Fever a Hot Topic in Banff

By Geoff Geddes, for Swine Innovation Porc

Banff in January may give you the chills, but things were heating up at the 2019 Banff Pork Seminar with talk of the growing threat from African Swine Fever (ASF). The contagious hemorrhagic disease affects pigs of all age groups, with mortality rates as great as 100 per cent. With high virulence forms of the virus, ASF is characterized by high fever, loss of appetite, hemorrhages in the skin and internal organs, and death in 2 - 10 days on average.

Against that backdrop, Swine Innovation Porc held an information session featuring two leading swine disease experts. Part I of this article shares the insights of Dr. Egan Brockhoff, managing partner of Prairie Swine Health Services in Red Deer, Alberta.

“In January, 2014 at the Banff Pork Seminar, we announced that PED had come to Canada,” said Dr. Brockhoff. “Today, we’re announcing that PED has arrived in Alberta. That disease has been an excellent teacher when it comes to our foreign animal disease preparedness, and gives us much to think about as we turn our attention to ASF.”

African Swine Fever first entered Europe in 1957, circulated slowly until the mid-1980s, and was thought to be eradicated before being brought to the nation of Georgia in 2007 via international waste. Since then, it has moved slowly and steadily across Eastern Europe and into China.

As recently as six months ago, few in North America had even heard of ASF, largely because it was not affecting areas of importance for global pork production. With the disease’s appearance in countries like China and Belgium, however, and its growing proximity to France and Germany, the issue is hitting closer to home.

“The virus is moved largely by human activity,” said Dr. Brockhoff. “We transport it around the planet by carrying infected food across borders, moving pigs or leaving garbage where we shouldn’t.”

You can’t stop what you can’t spot

So what could be worse than a spreading, contagious and fatal pig disease threat? How about one that is hard to spot?

“On paper, most vets would say that ASF should be easy to see. In reality, though, at farms where it breaks it often survives for days or weeks before anyone detects it, as it can look like so many other diseases.”

It all adds up to what Dr. Brockhoff calls an “increasing concern and significant risk to the Canadian pork sector”. ASF circulates naturally in different wild pig populations in Africa like warthogs and bush pigs. Those animals don’t die from the disease, but rather act as reservoirs, giving the virus a chance to move on. By

contrast, ASF would kill domestic pigs in Canada and the United States.

“Unlike PED, this disease shows no gender or age predilection; it affects everyone equally. This is a reportable disease all over the world. It closes borders, and ours would be closed for at least a year, causing economic turmoil for the industry. Belgium lost 13 markets within a few days of ASF arriving.”

In the last four months, over 1000 new cases have been reported in Europe alone, causing great anxiety in what has become a massive European pork sector. As the prospect of ASF touching down in North America moves from “if” to “when,” getting to know the enemy may offer the best chance of defeating it.

“Because ASF doesn’t look dramatically different from some other conditions, we will miss it during its first week in Canada. Eventually people will notice the hemorrhages and other aspects of the pathology, but not at first. This disease is like lava, moving gradually and



*Taking precautions against ASF is equally important for small farms as it is for large commercial operations.
Photo by Amber Kipp on Unsplash*

steadily, so a pig could be positive and not infect another animal for 10 days. The good thing about ASF is that it spreads slowly; the bad thing is that it spreads slowly.”

When symptoms do appear, they can include high fever, weakness, difficulty standing, vomiting, diarrhea, coughing or labored breathing, and red or blue blotches on the skin, especially around the ears and snout.

Once contracted and present in the muscles and tissues, ASF won’t die with the infected animal. It can be transmitted via oral or nasal exposure, either directly - by contact of infected pigs with healthy pigs - or indirectly through contact with the virus from excretions, secretions and infected tissues. As with PED, contaminated vectors like feed, transport and footwear are also a risk.

Vaccines of little value

For those pinning their hopes on a vaccine solution for ASF, the message is short and to the point: don’t count on it.

“On Canadian farms, we give 3 – 4 vaccines to weaned piglets daily, and in China that number is around 16. We rely heavily on vaccines to prevent disease movement, but very little is known about the mechanisms of ASF, so no viable vaccines are on the horizon. If the virus comes to Canada, we would likely have to cull the infected population.”

Though ASF and PED share some common features, the former is a hardier disease. If PED is a scrapper, ASF is a heavyweight champ. The virus is stable over a wide range of temperatures and pH, and can survive putrefaction, meat maturing, cooking, smoking, curing, air drying, salting and freezing. ASF is





*Dr Egan Brockhoff presenting at Swine Innovation Porc's health session in Banff in January 2019.
Photo: Bruce Cochrane*

infectious for 11 days in feces, 15 weeks in chilled meat (longer in frozen meat) and months in bone marrow.

Just as knowledge is power when it comes to fighting disease, absence of knowledge can be a killer.

“One of the greatest risk factors around ASF is lack of awareness. I did a farm audit last week and the producer didn't even know about this virus. A lot of people may also be unaware that it can move in feed ingredients. We import soybean meal from China, where they put feed on the ground to dry and pigs are moving up and down the road, so there's a real chance of fecal contamination.”

On the feed front, both contaminated feed ingredients and contaminated packaging can potentially carry live virus. Fortunately, holding feed ingredients in storage prior to feeding can inhibit survival of ASF. While time, temperature, the feed ingredient and the properties of the virus all impact how

long the disease survives, the key takeaway is that the higher the temperature, the shorter the virus survival time.

“The [CPC \[Canadian Pork Council\] website](#) shows withholding time for feed as 20°C for 20 days or 10°C for 100 days to reduce the risk. Some producers I've talked to said they don't have time to do this, and that scares the heck out of me.”

From front lines to backyards

Also cause for concern is that for every commercial pig farm in Canada, there is a backyard farm that knows nothing about the disease or the intricacies of biosecurity. For those that can be reached and trained, however, there are some critical actions that can improve their odds against ASF.

“Quarantine incoming products from affected countries or stop pork products from entering your farm altogether. Be proactive in talking about feed biosecurity with suppliers and nutritionists, and hold regular biosecurity audits and meetings with your team. There are so many demands on workers every day that it's easy for people to get tired and look for shortcuts, so we must remain vigilant.”

As important as these practices are for larger farms, it's equally vital that the message get through to smaller operations.

“Should one farm in B.C. with five pigs get ASF, the border will be closed across Canada.”

If that doesn't give you chills, nothing will. ☹️