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Swine Newsletter

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### More on Porcine Epidemic Diarrhea Virus

- News of Ontario's first PEDV positive case broke while I was at the Banff Swine Seminar on January 23<sup>rd</sup>. It cast a dark cloud over the sessions.
- We are now up to 21 positive sites in Ontario and counting.
- The source of the outbreak has been found and eliminated. i.e. porcine blood protein from an American source.
- PED is an emerging disease that veterinarians must report to OMAF under the Animal Health Act. OMAF and private veterinarians, Ontario Pork, and many individuals in our industry are working hard to contain and control this outbreak.
- Over 5000 environmental swabs have been processed by Animal Health Laboratory. Initially, OMAF was covering the cost of all the lab work. Right now we have to pay for environmental swabs. OMAF is still picking up the tab for clinical suspect cases.
- Good information is coming from the environmental swabs. As of February 26<sup>th</sup>, of the 721 trailers that have been tested, only 5% have been positive. But positives continue to be detected. This indicates that the virus is still in circulation, but at a low level, in Ontario at this time.
- We are disinfecting the floors at the Mitchell Vet Services clinic and at the Pauly Vet Clinic at the end of every day. We are swabbing the entry ways and our trucks every week. So far they have all been negative.
- Obviously, we are taking all precautions to ensure that we are not moving this bug around.
- In fact, limiting lateral spread from the herds that broke initially is a major task for the whole industry. We still hope to contain this thing, get through to warmer weather, and have it burn out! We are still attempting to eliminate it! Please, if you haven't already, do an audit of your own facilities; pin point weaknesses or threats in your biosecurity program and improve them.
- Having proper Danish entryways at each door in and out of your barn is one of the most important things you can do. Yes, I realize that implementing the best biosecurity in the world would not have prevented those initial cases but it can limit lateral spread.
- Initially, work done in the U.S.A. suggested that pelleting the feed was protective. It was a limited survey so it should have been taken as information rather than proof. From what we've found out so far, the pelleting process uses different temperatures dependent on the phase of production for which the feed is intended. Early weaner stages of feed that has high levels of milk and protein products aren't pelleted to as high temperatures as finisher diets (somewhere around 100 ° F vs 180 ° F). The survivability research that was done showed that the virus was inactivated at 160 ° F for 10 minutes. In short, just because your feed is pelleted doesn't mean that it can't contain the virus.

- Outbreak data appears to implicate two significant factors: 1) Breaks in farm biosecurity and 2) Exposure to feed containing porcine blood protein.
- In Saskatchewan an unsurprising positive environmental sample was found on dirty boots in a dirty boot bin in a washed trailer returning to Saskatchewan after delivering pigs to a slaughter plant in the U.S.A. This is the way that we expected PEDV to enter Canada.
- To date PED has been confirmed in Manitoba, Ontario, Quebec and P.E.I.
- The farrow to finish herd that initially broke on January 23<sup>rd</sup> suffered high mortality in piglets during the first three weeks after infection. As of February 23<sup>rd</sup> the herd is reporting live and healthy piglets at seven days of age.
- We do have some management strategies for herds that break. For those of you who have experienced TGE in your herd, a PEDV outbreak will seem very familiar.
- We know about four different corona viruses.
  1. Transmissible Gastro Enteritis corona virus (we've known about it for years).
  2. Porcine Respiratory Corona Virus. We found out about it in the 90's. It is not pathogenic and cross protects herds against TGE.
  3. Porcine Endemic Diarrhea Virus. This is the one causing all the fuss right now.
  4. Swine Delta Corona Virus (SDCV). Brand new, found in Ohio. Causes disease and clinically is just like PEDV and TGEV.
- The vaccine: On Friday, January 31<sup>st</sup> I was on a conference call with Henk Harris of Harris Labs along with other swine vets in Ontario and Alberta. Harris labs have developed a non-viable, non-replicable recombinant vaccine that will be useful in endemic herds (herds that have gone through an epidemic outbreak and remain infected even after thorough feedback of the live virus). Good efficacy data is not yet available and it is not considered to be useful in the face of an outbreak. Dr. Harris did not know if there is any advantage to vaccinate a naïve herd.
  - The vaccine is expensive and requires two injections. It is a frozen vaccine available in liquid (only good for 42 days) or frozen on dry ice (special freezer required).  
At this point in time we are not recommending it to our clients with naïve herds.
- About the Growing Forward 2 – PED Biosecurity Funding Assistance Program.
  - It is easy to read through the program and choose a project that requires some funding. Similarly the application is straight forward. Part of the application is a Biosecurity Risk Assessment completed by a veterinarian. If you took the National Biosecurity Program a couple of years ago, and if you had Glenn or I make a farm visit to do that assessment, than you should already have a copy of our assessment with the date and signature. This will do. Now, if you are choosing to do something other than the project already listed on page 10, you might want to meet with us and redo that risk assessment. Obviously, if you have lost or misplaced it you will want us to come out and go through it again.

Yours truly,

R.G. Reed  
RR/cp