

This report is communication for swine producers and swine industry representatives, compiled by the OAHN Swine Expert Network. It includes summary information obtained from the OAHN quarterly survey of clinical impressions provided by practicing veterinarians in Ontario, and laboratory data from the Animal Health Laboratory and Gallant Custom Laboratory.



Ontario Animal Health Network (OAHN) Swine Expert Network Quarterly Industry & Producer Report

October-December 2015

Report #2

Highlights

- OAHN Swine Network Project to investigate weaned pig morbidity and mortality rates, the major causes of morbidity and mortality and to assess therapeutic interventions. Currently enrolling nurseries...
- Influenza A virus detection is on the rise. News you need to know about this virus
- ***NEW** OAHN Swine Network Podcast Series on Influenza A virus. Part I now available
www.oahn.podbean.com
- OVC Swine Research Findings on resistance genes & post-weaning anemia with regards to zinc oxide in feed rations
- Information on how you can stay up to date with OAHN...

What is OAHN?

The Ontario Animal Health Network (OAHN) is a project focusing on early disease detection with the goal of identifying trends in animal health issues. The OAHN Swine Network is composed of veterinarians from private practice, the Animal Health Lab (AHL), Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and the Ontario Veterinary College (OVC). This group meets quarterly to discuss disease surveillance data and relevant swine health and welfare topics. A quarterly veterinary report and a quarterly industry and producer report are created to summarize the key points from these discussions.

OAHN Swine Network Project

As part of the OAHN efforts to monitor swine disease in Ontario, a project has been initiated to investigate weaned pig morbidity and mortality in Ontario swine nurseries. The study will identify and compare morbidity and mortality rates, the major causes of morbidity and mortality, and assess therapeutic interventions. Limited funds are available to compensate producers for recording and submitting the required information as well as for offsetting some of the diagnostic costs associated with determining the etiologic agents involved in weaned pig diseases and deaths. Herd identification will be coded and confidentiality will be ensured. Producers and veterinarians will benefit from comparing the range of health and productivity within the study group. Swine producers interested in this study should contact Tim Blackwell (email: tim.blackwell@ontario.ca; phone: 519 846-3413) or Robert Friendship (email: rfriends@uoguelph.ca; phone: 519 824-4120 ext. 54022).

OAHN Update: Increase In Influenza A virus Detection

The OAHN Swine Network noted an increase in Influenza A virus activity this quarter. Associated laboratories report that the number of Influenza case submissions has increased in 2015 compared to both 2014 and 2013. OMAFRA has provided funding for the AHL to type Influenza A positive samples that are submitted from Ontario at no extra cost to producers. Recent research at OVC has demonstrated that weaned pigs can be re-infected with the same viral strain and become sick and shed virus

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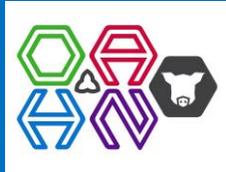
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again. This research indicates that we need to change our way of thinking about immunity to influenza in pigs. **These findings are discussed within the OAHN**

Influenza A podcast series at: www.oahn.podbean.com.

OVC Research Findings on Resistance Genes & Post-weaning Anemia Relating to Zinc Oxide

Two recent studies completed at OVC have resulted in interesting findings regarding Zinc Oxide use :

- **Investigation of risk factors for methicillin-resistance in staphylococci on swine farms:** This research concluded that the presence of Methicillin-resistant Staphylococcus aureus (MRSA) in nursery pig herds was associated with the use of high levels of zinc oxide in feed. This evidence supports the theory that zinc oxide can co-select for antibiotic resistance due to the genetic linkage of antibiotic and zinc-resistance genes. Slifierz, M., Friendship, RM., Weese, JS. Zinc oxide therapy increases prevalence and persistence of methicillin-resistant Staphylococcus aureus (MRSA) in pigs: a randomized-controlled trial. Zoonoses and Public Health 2015, 62:301-308.
Slifierz, M, Friendship RM, Weese JS. Methicillin-resistant Staphylococcus aureus in commercial swine herds is associated with disinfectant and zinc usage. Applied and Environmental Microbiology 2015, 81:8 2690-2695>
- **An epidemiological assessment of whether the use of high concentrations of zinc oxide in nursery pig diets is associated with post-weaning anemia:** This study found that high levels of zinc oxide (>2000 mg/kg) in the feed were associated with a higher odds of anemia in pigs 3-weeks post-weaning. There is good evidence to support restricting zinc therapy to the first week post-weaning to get maximum effect as an E. coli prevention. This will minimize overall toxicity and environmental build up concerns. Perri, AM, Friendship, RM, Harding, JSC, O'Sullivan, TL. An investigation of iron deficiency and anemia in piglets and the effect of iron status at weaning on post-weaning performance. J Swine Health Prod 2016, 24:10-20.

Do you know what level of zinc oxide is included in your feed ration and how long you are feeding it? Why are you using zinc oxide? Are the levels and the duration of time fed correct for your intended purpose? Start up a conversation with your feed rep and your herd veterinarian.

Get Involved!

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