NEWS RELEASE

Biosecurity and Infection Control Research and Practical Application in the Hog Industry

December 19, 2016

OENano East, a multi-surface protection, disinfectant, and water remediation product distributor, is conducting research into the development of a practical application program, focusing on improving biosecurity and infection control in the hog industry with specific focus on hog transportation. The products and protocols we are creating will also benefit many other types of protein producers at all stages of production, transportation and processing.

We know that the swine industry is challenged by infectious diseases such as Porcine Epidemic Diarrhea Virus (PEDV), Porcine Delta Corona Virus (PDCoV) , Transmissible Gastroenteritis Virus (TGEV), Senecavirus A (SVA) and Porcine Reproductive & Respiratory Syndrome (PRRS). In order to eliminate the spread of these transmissible infections, we must understand the role that biofilms (see definition at right) play in disease transmission. What if these viruses remain on surfaces within the bacterial biofilm matrix? The surfaces of hog trailers, pens, barns, and vehicles can serve as ideal environments for microorganisms to become associated as biofilms. This can pose a problem for disinfection protocols, as it may be impossible for the active ingredients to penetrate the complex matrix and kill the target pathogens.

Industry experts agree that there needs to be routine standardized sanitizing and disinfecting protocols followed in barns and even in transporting animals to reduce or eliminate the disease transmission process. Given the nature of biofilms found during the testing of some sanitizer/detergents, we are now introducing an ultra-concentrated enzymatic detergent that digests all the organic matter. It has an anti-microbial agent known as chlorhexidine that will help to inhibit the growth of pathogens. This detergent can be used to clean all the surfaces of the barn, pens, vehicles and even clothing worn by farm workers to reduce the disease transmission processes.

Following cleaning, the surfaces and equipment can be disinfected and we will be offering some safer alternatives in this area. Many of the cleaners and disinfectants currently in use in the hog industry contain toxic ingredients that can cause numerous human health concerns associated with exposure.

We have also been testing a novel nano-coating product to treat surfaces that is able to not only help repel dirt and organic matter from sticking to these surfaces, but also make the cleaning process faster and more efficient.

Going forward, we will be testing various disinfectant products for efficacy against PEDv. We will also continue to assess the use of the ultra-concentrated enzymatic detergent, nano-coating and biofilm detection products as components of biosecurity protocols within the hog industry.

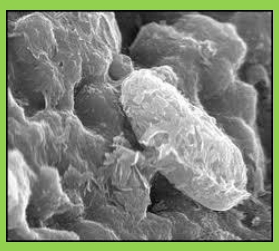
Visit OENano's website for further updates and news releases at www.oenano.com

Upcoming Events:

Banff Pork Congress
January 10-12 2017

OE Nano will be at this event and encourages all participants to stop by our booth and get updated on the new suite of products that will be available for biosecurity and infection control.

What Are Biofilms?



Biofilms are a cluster of microbial cells that are irreversibly associated (not removed by gentle rinsing) with a surface and enclosed in a matrix of primarily polysaccharide material.

Biofilms can pose a problem for disinfection protocols, as it may be impossible for the active ingredients to penetrate the complex matirix and kill the pathogens.

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