

Date: June 9th, 2017

OE Nano Inc., a multi-surface protection, disinfectant, and water remediation product developer and distributor, has conducted research over the last year into the verification 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 selected and developed will also benefit many other types of protein producers at all stages of production, transportation and processing.

An integral component of this new bio security program is the application of our state-of-the-art **NANO-TECHNOLOGY COATINGS** to hard surfaces to make them hydrophobic as well as reduce the adhesion of grease and oil. The benefits are numerous.

- 1) The water repellent feature makes water drain off faster on smooth surfaces and water does not soak into concrete or wood, helping protect your infrastructure and equipment from water damage and allowing them to dry faster.
- 2) A nano-coated surface is much easier to clean, requiring far less labour and water than an uncoated surface does to clean. Generally coated surfaces are 40 per cent faster to clean.
- 3) A nano-coating on a surface acts as a protective layer that inhibits the growth of microorganisms by making the surface unattractive for bio material adhesion.
- 4) Easy-to-clean means better and more thorough removal of microorganisms that otherwise would be growing on hard surfaces, including mould and fungi.
- 5) Coated surfaces last about 60 washes in the case of livestock trailers and floors. Walls, and farm equipment will generally last one to two years before any recoating is required, depending on the amount of abrasion the surface receives.
- 6) Optimal water pressure, nozzle angle, spray head type, dilution control, water use measurement and other components in pressurized cleaning systems are also addressed as part of our nano-coating program to reduce water usage, electrical power consumption and manpower needed to clean surfaces.

In our research to provide optimum surface adhesion of our nano-coatings we discovered that stubborn biofilms (protective protein shields created by bacteria colonies) were not being removed from farm related surfaces during most wash down and disinfection procedures. The biofilm is very resilient against most detergents, acids, and disinfectants. The bacteria and cohabitating viruses beneath a biofilm can be up to a 1000 times more resistant to disinfection products because they are not fully contacted by disinfectants. As a result of these findings, we have also brought an **ultra-concentrated enzymatic cleaner** to the farm market to address biofilms. We called this product **PRESOAK**, because it is used prior to disinfection stages and/or the application of our nano-coatings. The enzymes in our cleaner eat away at the biofilm and break it down during the course of a 10-15 minute foam soak so that the bacteria and viruses hiding beneath the biofilm are now exposed and vulnerable to good disinfection products. Check our website for further information under the agriculture section. www.oenano.com

This project was funded in part through *Growing Forward 2 (GF2)*, a federal-provincial-territorial initiative. The Agricultural Adaptation Council assists in the delivery of *GF2* in Ontario.

Upcoming Events:



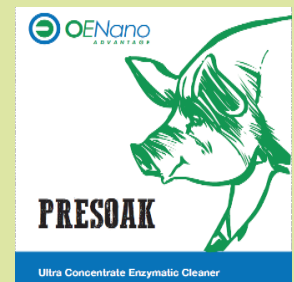
Alberta Pork Congress

June 14 & 15, 2017

Westerner Park

Red Deer, Alberta

Please visit our trade show booth 220,221 to discuss your biosecurity challenges and learn how we can help improve hog health and save you money.



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