



PROJECT OVERVIEW & TEST RESULTS
HOG FIELD TRIAL

Hog Field Trial – Farrow to Finishing Farm

Project Overview:

- The Better Biosecurity system was installed at a farrow to finishing farm to test the effect on SOW and piglet mortality, weight gain, feed conversion and medication requirements. Our micro-spray system uses a proprietary EPA-registered, medical grade disinfectant known as Paerolyte. Paerolyte is organic and contains hypochlorous acid as its active ingredient. Paerolyte is non-toxic, non-hazardous, and non-irritating, yet is 80 – 100x more powerful than bleach. Paerolyte has been tested extensively by government agencies (DOD, DOE, USDA) and leading research universities (Auburn University, University of Minnesota, Mississippi State) and has shown to eliminate 99.99% - 99.9999% of viruses and bacteria including C. Diff, E. Coli, Salmonella, Avian Flu, PRRS, and African Swine Fever virus.
- The micro-spray system was installed in two (2) locations at the test site, a 48-crate farrowing room (2 units) and a 2,400 head wean to finish barn (4 units). The units were installed in the ceiling area and fully automated to run for up to 15 minutes each day in the farrowing room and 20 minutes each day in the wean to finishing barn. All testing was repeated for multiple production cycles. Control groups were isolated and monitored for each test. In general, each unit covers approximately 60,000 cubic feet in 15 minutes and uses 4 oz of Paerolyte per minute of run-time.

Better Biosecurity

Micro Spray System



Paerolyte was administered daily as a micro-spray for up to 15 minutes in the farrowing unit and 20 minutes in the wean to finish barn. No negative side effects were observed. Paerolyte can be produced on-site, on demand at each location using the Better Biosecurity fluid generator.



Micro Spray System



Click Images to View Video

The micro-spray system was applied directly to the SOWs. No negative side effects were observed. No stress or discomfort was observed. SOWs appeared relaxed with the Paerolyte treatment. Paerolyte is safe, non-toxic, and has no harmful side effects.



Summary Farrow to Wean Production Results

Test Results - Farrowing Unit:

- SOW Mortality Decreased by 2.5 – 3.5%
- Pre-Wean Mortality Decreased by 2.9% - 4.3%
- Pre-Wean Piglet Weight Increased by 1 – 2 lbs / Pig
- Reduction in Wean to First Service – 0.5 – 1 day
- Use of Antibiotics Decreased by \$.20 – \$.30 / Pig
- Significant reduction in Rotavirus, PRRS, and “greasy” pig on pre-exposed piglets
- **Overall Value of Farrow to Wean Performance Increased by \$4.10 – \$4.30 / Pig**

SOW Farm – Rotavirus, PRRS & “Greasy Pig”



BEFORE MICRO-SPRAY

Paerolyte, an EPA registered, medical grade disinfectant was sprayed in the farrowing unit and within 24 hours, the impact of Rotavirus on piglets was significantly reduced! Further, there were no symptoms of “greasy” pig or PRRS on pre-exposed piglets in the test group. These findings are consistent with previous test results.



24 HOURS AFTER MICRO-SPRAY

Summary Wean to Finish Production Results

Test Results – Wean to Finish Barn:

- Post-Wean Mortality Decreased by 5.5% - 6.5%
- Finishing Weight Increased by 6.2 – 6.8 lbs / Pig
- Feed Consumption Decreased by 7.5 – 8 lbs / Pig
- Percentage of Sub-Standard Pigs Decreased by 3.4% – 3.8%
- Percentage of Tops Increased by 8.8% - 9.2%
- Use of Antibiotics Decreased by \$2.30 – \$2.60 / Pig
- **Overall Value of Wean to Finish Performance increased by \$17 - \$19 / Pig**

Wean to Finish – Test Data

Wean to Finish
Fogged vs Non-
Fogged
Comparison

Improvements in Wean to Finish Production					
		Wean to Finish (Fogged)	Wean to Finish (Non-Fogged)		Difference
Group		A	C		
Avg DOF		153.4	154.4		
ADG		1.63	1.59		0.04
ADFI		4.38	4.31		0.07
Feed Conversion		2.69	2.71		-0.02
Adj. FCR		2.71	2.74		-0.03
% CV		6.53	7		-0.47%
% Mortality		6.82	12.84		-6.02%
% Sub-Standards		2.45	5.94		-3.49%
% Tops		90.19	81.23		8.96%
Medication Cost / Pig		0.88	3.32		-\$2.44

Cost & ROI Analysis

Cost Summary – Farrowing (Annualized based on 5,000 Sows / 140,000 piglets)

Total Cost in Year 1 \$26,000 - \$28,000 (Setup, Equipment, Labor, Utilities, Paerolyte fluid)

Average Cost per Pig in Year 1 - \$.18 - \$.20 (140,000 piglets)

Average Cost Savings per Pig in Year 1 - \$4.20

ROI - Farrowing – 22.11 : 1 (\$22 in value per \$1 dollar invested)

Cost Summary – Wean to Finish (Single Turn – 2,400 Pigs)

Total Cost per Turn - \$3,500 (Setup, Equipment, Labor, Utilities, Paerolyte fluid)

Average Cost per Pig in Year 1 - \$1.40 – 1.45 (2,400 pigs)

Average Cost Savings per Pig in Year 1 - \$18

ROI - Wean to Finish – 11.63 : 1 (\$11- \$12 in value per \$1 dollar invested)

NOTE:

In addition to being used as a micro-spray, Paerolyte can be applied throughout the facility as a safe and highly effective alternative to traditional chemical-based cleaners and disinfectants. In a separate study, Paerolyte may be produced on-site, on-demand using our proprietary fluid generator, which saves significant time and money compared to purchasing concentrated chemical-based products.



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