

SWINE HEALTH

Title: Development and implementation of an on-farm cleaning and disinfection audit
NPB # 00-047

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Abstract:

Our goal was to determine whether rapid Lightning™ and BioClean tests used in the food industry to rate sanitation levels could be used in pork production units to evaluate sanitation. Additionally, sanitation audits were performed on a nursery, wean to finish unit, and farrowing house. Swab samples were collected from feeders, flooring, and walls in a wean-finish unit and a nursery room of a 1600 sow farrow-to-finish commercial operation. In both facilities, three 6.16 cm² swab samples were collected at each sampling site and analyzed using Lightning™, BioClean, and cultural examination for bacteria. The sensitivity and specificity of Lightning™ and BioClean tests were calculated for each surface using cultural examination as the gold standard for classifying a sample as clean or contaminated. Factors such as feed, manure, and disinfectant residues were tested to determine if they interfered with the sensitivity and specificity of Lightning™ or BioClean tests. Lightning™ tests were generally highly sensitive but lacked specificity. Lightning™ tests falsely classified many clean surfaces as dirty. BioClean tests were generally highly specific but lacked adequate sensitivity. BioClean tests falsely classified many dirty surfaces as clean.

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