

SWINE HEALTH

Title: PEDv Survivability in Manure-Amended Soil and Evaluation of Lime Application to Soil as a PEDV Biosecurity Measure – **NPB #14-269**

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Date Submitted: February 25, 2016

Abstract

There is concern that manure infected with the porcine epidemic diarrhea virus (PEDv) could serve as a vector for reinfection or disease transmission if the virus survives in stored manure or manure-amended soil. In regions of the U.S. where winter soil temperatures commonly remain near freezing and precipitation is sufficient to maintain moderate to high soil moisture content in the top 10 cm of the soil, the common practice of applying manure to soil following fall crop removal presents a potentially ideal environment for the virus to remain infectious in the soil. This project was designed to determine the transmission risk for PEDv in stored manure and manure-amended soil. Specific objectives of this project were to: 1) determine the survivability of the PED virus over time in two common soils at two moisture regimes treated with PEDv-positive swine slurry and held at temperatures representing three climates (southern Minnesota, northern Missouri, and central Oklahoma); and 2) determine the impact of lime application to manure on PEDv survivability.

These research results were submitted in fulfillment of checkoff-funded research projects. This report is published directly as submitted by the project's principal investigator. This report has not been peer-reviewed.

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