

ENVIRONMENT

Title: Evaluation of current products for use in deep-pit swine manure storage structures for mitigation of odors and reduction of NH₃, H₂S, and VOC emissions from stored swine manure – **NPB #17-158**

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.Scientific Abstract: Odorous gas emissions from swine production has always been a concern for the health of livestock and farmers. Manure additive has many advantages in solving this issue. It is cost-friendly and user-friendly for farmers, and it can be implemented without changing the current manure storage structure. The objective of this study is to evaluate the effectiveness of 12 current commercial manure additives on mitigating odor, NH₃, H₂S, GHG, and VOC from stored swine manure with pilot-scale setup. From this comprehensive study, there is no significant reduction observed for all targeted gases and no impact on manure properties.

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 This report has not been peer-reviewed.

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