

Evaluation of New Sustainable Bedding Materials with Stacked Litter Management on Turkey Health and Environment



This project is currently in the reporting stage and is a collaboration between PittMoss, LLC and Jones Turkey Farm. This research is supported in part by the intramural research program of the U.S. Department of Agriculture, Sustainable Agriculture Research & Education Northeast Partnership Grant.

Project Overview

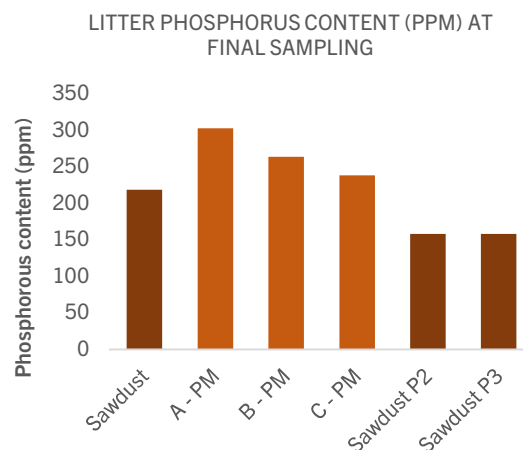
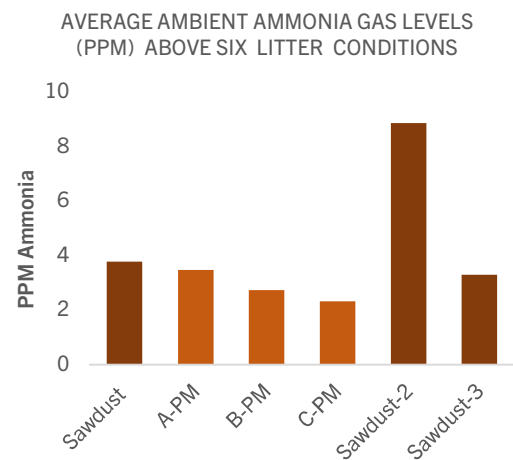
This study sought to investigate the use of PittMoss® ROOST, a paper-based, engineered fiber for use in poultry bedding within a stacked litter management system. The goals of this study were to evaluate the ability of PittMoss® ROOST to retain bird wastes and the nutrients contained therein as well as maintain a healthy environment for the birds themselves. Multiple flocks were reared over the course of a season, applying new bedding in layers as needed. Overall, findings suggest that PittMoss® ROOST creates a healthier environment for young poultts while also retaining more of their waste, leading to reduced nutrient runoff.

Findings

This study revealed that the engineered PittMoss® fibers make for a highly suitable and more environmentally sustainable poultry bedding alternative to sawdust. The structure of the PittMoss® fibers allows them to wick moisture and retain it, providing a drier, healthier environment for young turkey poultts. PittMoss® ROOST was also found to reduce the ammonia gas emissions from the bedding, providing improved air quality within brooding pens. Overall, the ROOST bedding retained poultry wastes effectively, decreasing the amount of nutrients leached into the local ecosystem and its associated waterways, preventing increased nutrient load further downstream.

Project Implications

Many poultry producers are becoming increasingly aware of the environmental impacts of their industry. As responsible stewards of their lands and waterways, they seek to mitigate as much as possible some of those impacts, especially the negative impacts of excess nutrient runoff on waterways. These findings show obvious potential for PittMoss® blends to replace sawdust in at least some poultry-rearing contexts to help farmers decrease their negative impact on waterways while improving the growing environment for their flocks. Because PittMoss® products are produced using waste materials and can break down naturally, ROOST bedding is sustainable across its entire life cycle.



The findings and conclusions in this preliminary document have not been formally disseminated by the U. S. Department of Agriculture and should not be construed to represent any agency determination or policy.