

The Impact of Alum on Pathogen Survival in Poultry Litter

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Most poultry litter is currently applied to agricultural lands, a practice that is under scrutiny by both federal and state lawmakers, due to concerns regarding nutrient contamination of surface and groundwaters from the poultry litter. Aluminum sulfate (Alum) is used to control ammonia emissions from poultry houses, thereby improving air quality. It also has been shown by USDA's Agricultural Research Service that alum reduces levels of phosphorous available for runoff to waterways. Yet, despite a growing interest and increased use in alum as a poultry litter amendment, its effect on pathogens and other microorganisms is virtually unknown. The purpose of this project is to evaluate the effects of high rates of alum application on the survival of bacterial pathogens in broiler litter. Research demonstrating that alum negatively affects pathogen survival would increase justification for its use to meet poultry health and marketability objectives as well as human health and environmental protection concerns. However, if research shows that pathogen survival is enhanced through the use of alum, the wide-spread adoption of alum application to litter should clearly be avoided.