Effect of Storage and Dietary Phytase on Phosphorus in Poultry Litter. (S11-mcgrath104842-Oral)

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Abstract:

Phytase use in broiler diets to reduce total P in broiler litter has become a common practice, however, little is known about the effect of dietary phytase on P solubility in the resulting litter, particularly when litters are stored for prolonged periods of time. This study was conducted to determine the effects of phytase in broiler diets and storage conditions on P solubility in the litter. Litters generated from four diets were stored for six months. The four diets were (i) National Research Council (NRC) recommendations, (ii) University of Maryland College Park (UMC) recommendations, (iii) UMC with 600 FTU phytase and a 0.064% reduction in non-phytate P (nPP), and (iv) NRC with 600 FTU phytase and a 0.10% reduction in nPP. Two storage containers were used for each litter type, one containing litter at its initial moisture content (M.C.) and the other was brought up to a M.C. of 40%. The litters were sampled periodically and analyzed for soluble P, M.C., and total P (initial and final samples only). Effect of diet on soluble P during storage will be discussed along with the implications for land application programs using broiler litters generated from diets including phytase.

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