**Determining Endogenous Losses of Calcium in the Modern Day Growing Broiler Chick**

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Abstract

The poultry industry, just as any other business market, strives for high production, high efficiency, and low costs. Since 2006, producers have been facing rising feed prices due to the high demand of corn for the ethanol market (Donohue, M., & Cunningham, D. L., 2009). This problem calls for a solution to bring profitability back to the poultry industry. This study sought to determine the endogenous losses of calcium fed as either organic or inorganic sources. It has become common practice to base the formulation of diets based on available phosphorus while calcium is still merely crudely estimated by the amount of total calcium provided in a particular feedstuff. Precisely formulated diets help reduce feed costs by helping the animal to utilize every single nutrient within its diet to the fullest thus reducing the excess nutrients that are passed on as waste. In our study, endogenous losses of calcium were to provide better information of the bird’s requirements. A total of 17 different diets were fed, with 4 series of diets containing varying amounts of calcium and forms of calcium (inorganic Ca as limestone and organic Ca as canola meal. Response variables measured in this experiment included growth performance and bone measures including dry matter and ash content. Growth performance data we gathered at the end of the study suggested that endogenous losses were present and the tibia ash percentages calculated signified that diets higher in Ca had higher tibia ash.