

SWINE HEALTH

Title: Quality control assessment of blended source vitamin D supplied to feed manufacturers for use in swine diets - **NPB #11-177**

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Scientific abstract

In recent years, metabolic bone disease issues have gained interest because of clinical hypovitaminosis D cases in swine. The objective of this study was to assess the quality of vitamin D supplements from multiple commercial suppliers' overtime to determine if variation in feed vitamin D could be part of the increased prevalence within the swine industry. Bulk vitamin D supplement samples, used for inclusion in swine diets, were solicited once a month of nine months from five different major swine feed suppliers and tested in a blinded fashion at two independent laboratories for vitamin D concentration. Date of manufacturing, company, country of origin, and testing laboratory were subject for evaluation in this study. Of the 45 supplement samples that were evaluated, no individual supplement, from any supplier, was found to be significantly lower than the expected concentration of 500,000 IU/lb. However, there an unexplainable month effect found during testing indicating the potential for difference in bulk vitamin D concentrations received at swine feed suppliers. In addition, a company by laboratory interaction was found indicating test method may give varying results. The results from this project highlight that bulk vitamin D feed supplement concentrations can be variable, but do not appear to be a reason for increased metabolic bone disease seen within the swine industry.

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 This report has not been peer-reviewed.

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