

# WITHOUT ADEQUATE P, ANIMAL HEALTH MAY SUFFER

## Recent LNE diet studies show phosphate use remains important

Low Nutrient Excretion (LNE) diets — developed mainly to lower Nitrogen and Phosphorus excretion in pigs to reduce the risk of nutrient runoff — may not consistently meet dietary requirements of the animals, according to results of recent studies.

A research study conducted at Purdue University's Department of Animal Sciences indicated no significant detrimental effects on growth performance or carcass characteristics between pigs fed a conventional diet and those fed a low-P LNE diet, which, in this instance, combined phytase with High Available Phosphorus (HAP) corn.

However, other university studies showed that low-P LNE diets have the potential to cause growth problems because variability in feed product composition can create a phosphorus deficiency.

For instance, several studies at the University of Kentucky, which involved an LNE diet comprised of phytase and lower P content, showed a significant decrease in the bone density of the pigs.

With the uncertainty surrounding Low Nutrient Excretion diets, a word of caution seems to be in order.

"If you're not careful with LNE diets and the proper balance of nutrition isn't provided, the health and performance of the animal suffers," said Dr. Steve Auman, Director of International Sales, PCS Sales Feed Products.

Auman is not alone in his assessment of LNE diets.

After reviewing years of his research on using phytase in layer formulations, Auburn University's Dr. David Roland has expressed some concern that nutritionists may reduce the mineral phosphate too much when using phytase enzymes. The consequences could be reduced animal performance or skeletal integrity, according to Roland.

While there's no debate that LNE diets could be a step towards reducing N and P discharge in the field, the jury's still out on how such diets affect an animal's growth and performance, which means that feeding proper supplements, including P, is recommended as a precautionary measure.