Available phosphorus requirement of broilers fed a sorghum based diet from day 22 to 49

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The available phosphorus (AP) requirement of broilers fed sorghum based diets was investigated with or without dietary phytase (Phyzyme XP) supplementation. Ross male broilers (day 22 post-hatch) were allocated to pens with 10 birds/pen. The experimental diets contained AP from 2.0 to 5.0 g/kg diets in increments of 1.0 g/kg. The Ca level was 9.0 g/kg diets. The diets were fed to 5 replicate pens with body weight and feed intake recorded. On day 49 the birds were euthanized and tibia bones and toes were taken for analysis of ash contents. Body weight, feed intake and feed conversion ratio (FCR) of birds on diets containing AP of 2.0 g/kg with phytase were comparable to diets containing higher AP levels. There were no significant differences in tibia bone and toe ash contents between the treatments, nor were there any significant correlations between body weight or FCR and tibia bone or toe ash contents. Therefore tibia bone or toe ash contents may not be suitable criteria to assess dietary P requirement of finisher broilers. The results suggest that 3.0 AP g/kg without phytase and 2.0 g/kg with phytase met the AP requirement of birds from days 22 to 49.