

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

LEVELS OF DIGESTIBLE PHOSPHORUS FOR GILTS FROM 30 TO 50 KG

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The objective of this study was to evaluate digestible phosphorus levels in diets for dairy gilts from 30 to 50 kg on performance and quantitative and qualitative characteristics of the wastes. Sixty litters, weighing 29.99 ± 3.37 kg, were used in a randomized block design with five levels of digestible phosphorus (0.219, 0.299, 0.319, 0.369 and 0.419%), six replicates and two animals per experimental unit. The obtained data were submitted to analysis of variance, considering the initial weight of the animals as covariate, also were performed linear and quadratic regression analysis, the possible differences in the study variables between the diets were evaluated using the Tukey test with significance of 5%, and the tests were performed using SAS statistical software (version 9.1). The levels of digestible phosphorus did not influence ($P > 0.05$), the final weight, total weight gain, average daily weight gain, daily ration consumption, total ration consumption, crude digestible protein consumption, digestible lysine consumption, digestible energy consumption and feed conversion. Daily intakes of digestible phosphorus and digestible calcium intake increased linearly ($P < 0.01$) according to the increase in dietary phosphorus level, as there was no significant effect on daily ration intake, it can be inferred that the increase in the consumption of digestible phosphorus and the increase in the consumption of digestible calcium verified occurred due to the increase of their concentration in the diet, since calcium increased in the diet following the proportion of 2: 1 as recommended due to the inclusion of phosphorus. The dry matter and natural matter production, residue coefficient, total solids and total nitrogen of the manure were not influenced ($P > 0.05$) by phosphorus levels. On the other hand, it was possible to observe linear effect ($P < 0.01$) for volatile solids and total phosphorus in swine manure receiving diets with increasing levels of digestible phosphorus. The concentration of organic matter increased in the wastes, any nutrient supplied in excess, that is, above the requirement of the animal will not be digested and used by it, being this nutrient excreted via waste, increasing the percentage of organic material and polluting power of manure. It was concluded that the level of 0.219% of digestible phosphorus, corresponding to the consumption of 3.67 g of daily digestible phosphorus, meets the nutritional requirements of phosphorus for gilts from 30 to 50 kg and allows the reduction of excretion of phosphorus in the wastes.

Keywords: feeding of pigs, nutritional requirement, swine manure,

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