**STANDARDIZED ILEAL AMINO ACID DIGESTIBILITY OF BROILER CHICKENS FED WHEAT-BASED DIETS SUPPLEMENTED WITH CARBOHYDRASES.**

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This study was conducted to evaluate the standardized ileal amino acid digestibility (SIAAD) of broiler chickens offered wheat-based diets supplemented with varying levels of xylanase and β-glucanase (AB Vista, Marlborough, UK.). A total of 600 male Ross 308 broiler chickens were randomly assigned to a 3 (none, low (30 mg/kg) and optimum (100 mg/kg) xylanase levels) × 3 (none, low (30 mg/kg) and optimum (100 mg/kg) β-glucanase levels) factorial array in a completely randomized design. A nitrogen-free diet (NFD) treatment was also included in order to assess endogenous nitrogen secretion (ENS) and standardized ileal amino acid digestibility (SIAAD). Each of the treatments was replicated 6 times, with 10 birds per replicate. The diets were fed *ad libitum* for 35 days in 3 phases – starter (1-10 d), grower (11-24 d) and finisher (25-35 d), while the NFD was fed for 7 days from 18 to 24d. Birds were raised in a floor pen system. Birds were assessed at the end of each phase for feed consumption and growth. In addition, ileal digesta samples were collected from 3 birds per pen at 24 days of age for assessment of nutrient digestibility. A general linear model procedure was used to analyze the data (Minitab, version 17). Results showed that the flow of almost all amino acids at the ileum was improved (not significant, P > 0.05) by xylanase and β-glucanase supplementation. Supplementation with β-glucanase increased (P < 0.05) the apparent and standardized digestibility of all tested amino acids. Xylanase supplementation had no effect (P > 0.05) on apparent and standardized ileal amino acids digestibility, and there was no interaction between the test enzymes. Results suggest that ileal amino acid digestibility of wheat-based diets can be improved by the two enzymes, but to a greater extent by β-glucanase.

Keywords: β-glucanase, xylanase, ileal, digestibility.