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## Interaction between dietary $\beta$ -alanine and valine supplemented to broilers diet

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The objective of the present study was to evaluate the interaction between dietary  $\beta$ -alanine and valine supplemented to broilers diet. A total of 504 one day old female broilers (Ross 708,  $37.3 \pm 0.1$  g) were randomly assigned to 42 pens (12 chicks/pen). Six blocks of seven pens were made in a randomized  $3 \times 2$  block design. Each block received a starter (days 1-21) and finisher (days 22-42) diet with one out of three valine levels (NV: 0.85%, HV: 0.89%, VHV: 0.93% digestible valine) and no (CON) or 500mg/kg  $\beta$ -alanine (B-ALA). At pen level average daily feed intake (ADFI) and average daily gain (ADG) was calculated. At day 42 broilers were weighed and slaughtered. Statistical analyses (SPSS 22.0) was performed using a general linear model with valine (NV, HV, VHV) and  $\beta$ -alanine (CON, B-ALA) as fixed factors and initial pen weight as covariate. During the finisher phase, ADFI tended to be higher for B-ALA (CON  $131.8 \pm 5.9$ , B-ALA  $136.0 \pm 7.6$ ,  $P=0.083$ ) and ADG tended to be lower for HV-B-ALA in comparison to the other groups ( $P=0.078$ ). Chilled carcass weight of B-ALA ( $1520 \pm 155$ ) was significantly higher than for CON carcasses ( $1492 \pm 156$ ,  $P=0.036$ ). Slaughter yield was higher for NV-B-ALA ( $70.8 \pm 0.1\%$ ) compared to the other groups ( $P=0.003$ ). Results indicate that  $\beta$ -alanine supplementation improved slaughter performance of broilers. Limited interaction with excess valine was observed, but it would be worthwhile to test the effect of  $\beta$ -alanine in valine deficient diets.