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CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

CARCASS AND CUTTING YIELD OF BROILERS FED DIETS WITH DIFFERENT VALINE CONCENTRATIONS AND RAISED IN HOT CLIMATE FROM 22-42 DAYS

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Brazilian broiler production faces several challenges, including climate constrains that negatively affect animal production and raise the need of nutritional adjustments for each particular condition. This study aimed to determine the best dietary concentration of valine to improve carcass and cutting yield of broilers raised in hot climate. Two experiments were carried out in the poultry sector of the Experimental Farm of UFMT, using Cobb male broilers from 22-33 days (trial 1) and 34-42 days (trial 2). In each trial, a total of 720 broilers were distributed in a completely randomized design with six treatments and eight replications of 15 birds. Treatments consisted of diets supplemented with different levels of digestible valine: 7.32, 7.82, 8.32, 8.82, 9.32 and 9.82 g/kg in trial 1; 6.77, 7.27, 7.77, 8.27 8.77 and 9.27 g/Kg in trial 2. . Carcass and cutting yield of 3 birds per pen were evaluated in the end of experimental periods. Data were regressed against dietary valine concentrations using a linear regression model. Significance was set at p≤0.05. In the end of trial 1, at 33 days, quadratic effect of valine concentrations was detected on gizzard weight and small intestine length. No significant effect of treatments was detected on the relative weights of carcass, plumage, breast, liver, heart, pancreas, small and large intestine, as well as large intestine length. In the end of trial 2, at 42 days, quadratic effect of valine concentrations was detected on relative liver weight. Treatments did not affected relative weights of carcass, plumage, breast, gizzard, pancreas, small and large intestine, as well as small and large intestine length. In conclusion, dietary concentrations of 8.74 and 6.77 g/kg of valine are recommended for broilers raised in hot climate from 22-33 and 34-42 days, respectively.

Keywords: amino acid, poultry, heat stress, requirement