

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

VITAMIN C AND SELENIUM FOR BROILERS FROM 1 TO 21 DAYS OF AGE: PRODUCTIVE PERFORMANCE

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Environmental and nutritional management is a strategy applied to lessen the high temperature deleterious effects on broilers' performance, with nutrition playing a paramount role, since changes in the environment's temperature (air conditioning of facilities) are more costly. In this context, this research was developed to evaluate the effects of adding levels of vitamin C and organic selenium in broiler chickens' diet, by assessing their performance parameters, kept in high temperature environments, from 1 to 21 days old chicks. A total of 700 chicks were distributed in a randomized block design, in a 2 x 3 + 1 factorial scheme. It was used two levels of vitamin C (150 and 300 mg of ascorbic acid per kg of ration), and three levels of organic selenium (0.2, 0.4 and 0.6 mg of selenium per kg of ration) and a control diet (without supplementation of vitamin C and selenium, but with base levels of 0.3 mg sodium selenite per kg of ration, as established by the premix manufacturer), reaching a total of seven treatments and five repetitions, with twenty birds per experimental unit. The experiment was split into two stages, 1 to 7 days and 1 to 21 days old broilers. Diets supplemented with 150 and 300 mg of vitamin C per kg of ration combined with levels of organic selenium ranging from 0.2, 0.4 and 0.6 mg per kg of ration did not improve feed intake, weight gain and the productive efficiency index of broilers, from 1 to 7 and from 1 to 21 days old. However, additional levels of selenium, independently, reduced the feed conversion in the pre-initial phase. The supplementation level of 300 mg of vitamin C per kg of ration improved breeding viability of the total period, 1 to 21 days. Supplementation of vitamin C and selenium in diets for broiler chickens, in the environmental conditions in which the research was performed, did not effectively improve production performance, indicating that the amount in the basal diet meets the animals' nutritional requirements, with sufficient levels to act in antioxidant defense and to promote the proper growth of the birds in the studied phases.

Keywords: antioxidant, environmental conditions, nutrition, poultry industry

Acknowledgments: To Fundação de Amparo à Pesquisa do Estado do Piauí - FAPEPI for financing this research and to Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - CAPES for the fellowship grant.

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