

عنوان مقاله:

The Effect of Various Levels of Chromium on Growth, Carcass, Immunity, Blood, Liver enzymes, Cecal Microbiota, Sensory Quality, and Fatty Acid Profile Traits in Broiler Chicks

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نویسندگان:

Matin Naddaf-Fahmideh - Department of Animal Science, Rasht Branch, Islamic Azad University, Rasht, Iran

Alireza Seidavi - Department of Animal Science, Rasht Branch, Islamic Azad University, Rasht, Iran

Mehrdad Bouyeh - Department of Animal Science, Rasht Branch, Islamic Azad University, Rasht, Iran

خلاصه مقاله:

This experiment was conducted to investigate the effects of three levels of chromium (Cr) (0 , 700 , and $1400 \mu\text{g/kg}$ of diet) on growth performance, carcass characteristics, immunity, blood parameters, cecal microbial flora, meat taste, and fatty acid profile of Arbor Acres commercial broilers. 120 one-day-old male chicks with four replicates and 30 chicks per replicate were used in a completely randomized design for 42 days. The results of the experiment showed that the lowest cost per kg of live chicken and the best European production index, without statistically significant difference, was demonstrated in $Cr700$. The growth performance in the whole period (1-42d) was not affected by Cr ($P > 0.05$). The amount of antibody titer against Newcastle virus, influenza, and sheep red blood cells was affected by experimental treatments ($P \leq 0.05$). The data showed that the percentage of saturated fatty acids such as myristic acid, palmitic acid, and stearic acid decreased and the amount of unsaturated fatty acids increased in $Cr700$ and $Cr1400$ compared to the control group. The fat content, juiciness, color, chewing ability, elasticity, oral sensation, and general acceptance were affected by using Cr ($P \leq 0.05$). Also, the data showed an improvement in cecal microbial flora in broilers fed Cr. In conclusion, it is recommended to feed $700 \mu\text{g/kg}$ Cr Arbor Acres farming.

کلمات کلیدی:

chromium, Immune system, Taste evaluation, Cecal microbial flora

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