Abstract

The supplementation of cobalt and vitamin B12 in diets for commercial laying hens on the second production cycle was studied. Four hundred and eighty light commercial laying hens, Lohmann LSL, were used at initial phase of forced molting laying period. The trial was conducted in a randomized design. The plots were the treatments which were constituted by combination of five cobalt levels (0.00; 0.30; 0.60; 0.90 and 1.20ppm) and two vitamin B12 levels (without and with 10µ/kg), and the split-plots were four periods (21, 42, 63 and 84 days) during the second period of production, with 4 repetitions and 12 hens per experimental unit. Food and water were provided ad libitum and eggs were collected twice daily. Performance and egg quality parameters were evaluated. At the end of experimental period, two layers from each treatment were slaughtered, and liver and blood samples were taken for analysis. Performance and egg quality were not different (p>0.05) among cobalt supplementation levels, although egg damage data were different (p<0.05). Supplementation with vitamin B12 decreased egg weight. No influence of cobalt or vitamin B12 supplementation was seen on the concentration of cobalt in the liver and yolk as well as on blood analysis (hematocrit, hemoglobin, erythrocytes, and leukocytes). The results revealed that vitamin B12 supplementation was important for commercial laying hens on the second cycle of production, but not cobalt supplementation.

Keywords

cobalt, egg production, laying hens, nutrition, vitamin B12