

عنوان مقاله:

Comparative Effect of Ascaridia Galli Infection on the Two Laying Hen Lines on the Liver Function and Immune Response

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خلاصه مقاله:

Chicken production is quickly rising due to the low associated costs and the capability of poultry to convert nutrients into biological protein along with chicken meat accounting for ۳۰% of all animal protein eaten by humans. Despite advances in poultry production, parasitic illnesses in laying hens remain a problem. Farm birds reared in semi-intensive and free-range systems are more prone to parasite infections due to the absorption of polluted water and food from scavenging behaviors and waste droppings. In this study, the effects of *Ascaridia galli* infection on the immune response and liver function of two laying hen lines are compared, and their infection resistance is determined. In total, ۵۰ laying hens at eight weeks of age were used (۲۵ Lohmann brown-classic and ۲۵ Lohmann IsI-lite), and each line was divided into two groups: an infected group ($n=۱۵$), which was orally infected with a single dose of ۵۰۰ *A. galli* embryonated eggs, and a control group ($n=۱۰$), which was given normal saline. After four and eight weeks, blood was collected from the wing vein to assess the serum's AST, ALT, total protein, and IgY levels. The results demonstrated that the infected Lohmann brown-classic and Lohmann IsI-lite chickens presented significantly increased ($P\leq ۰.۰۵$) AST, ALT, and IgY, compared to the respective control group. Moreover, Lohmann brown-classic hens presented a significantly increased ($P\leq ۰.۰۵$) IgY concentration four weeks after infection, compared to Lohmann IsI-lite hens. From our results, it can be concluded that genetic variation plays a crucial role in the immune response against *A. galli*, where the Lohmann brown-classic line was found to be more resistant, compared to the Lohmann IsI-lite line.

کلمات کلیدی:

Ascaridia galli, chickens, resistance, IgY

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