



Effect of ND Vaccine, Multivitamins AD₃E, and Omega-3 on Performance and Immune Response of Broilers

Mashaan A. Al-zuhairy¹, & Yasser Jamal Jameel^{2*}

¹ Department of Public Health, College of Veterinary Medicine, Baghdad University, Baghdad, Iraq;

² Department of Public Health, College of Veterinary Medicine, University of Kerbala, Karbala, Iraq

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***Corresponding author:**

Email address:

yasser.alasadi@uokerbala.edu.iq

Abstract

This field study intended to compare between in ovo injection of Newcastle disease (ND) killed vaccine, multivitamins AD₃E, and omega-3 with their supplying nutrients by feed and use conventional ND vaccination

on performance and immune response of two strains of broilers. Eggs of two commercial broiler strains were used in this experiment (Ross 308 and Cobb 500). On day 18 of incubation, three hundred fertilized eggs from each strain were distributed into three groups (100 eggs for each group). The first group was injected with 0.1 ml saline solution and acted as a control (T1), (T2) was injected with a mixture (0.1ml multivitamins AD₃E and 0.1ml omega-3 oil), 0.1 ml ND vaccine and (T3) was injected with 0.1 ml saline solution. After hatching, all hatched chicks were distributed into three equal groups and each group subdivided into two replicates. All chicks in T1 and T2 were fed on a standard diet, while chicks in T3 were feed on basic component diet lack of 0.25% of fat source and supplemented with omega-3 plus AD₃E (50gm/100kg), until the end of the experiment. Traits involved hatchability, body weight, weight gain, feed intake, feed conversion ratio and antibody titer against ND virus. Results revealed that hatchability, body weight, weight gain, and antibody titer against ND virus and feed conversion ratio were improved significantly ($p \leq 0.05$). However, feed intake was reduced significantly in T2 and T3, as compared with a control group of the two strains (Cobb and Ross). Therefore, using in ovo injection of ND vaccine, AD₃E and omega-3 for improving a hatchability, performance, and antibody titer against ND virus are highly recommended.

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