The effect of amino acid supplement on the efficacy of the New Castle vaccine in broiler poultries

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Abstract

New Castle disease (ND) is one of the most important and devasta_ng disease that affected approximately 8000 species of birds. In many countries, ND has economic impact on poultry popula_on and can severely cause economic losses in poultry industries. In spite of vaccina_on against new castle virus, outbreaks of ND remain common. In the present study, we evaluate the effect of amino acid supplement on the efficacy of the New Castle vaccine in broiler poultry.

Hence we added amino acid supplement to the poultry diet (broiler Ross 308) on the days of vaccina_on. The poultries were vaccinated four _me against ND (respec_vely: B1 beverage vaccine (day 1), Clone beverage vaccine (day 9), Lasota beverage vaccine (day 18), Avinew beverage (day 27)). To assess an_body concentra_on and evaluate immune system response to vaccine, the blood sampling was taken on days 2, 8, 16, 24, 32, 38 and 44 and heme inhibi_on (HI) test was performed. The data compared with control group (received any vaccine and amino acid supplement) and vaccinate group (received vaccine without amino acid supplement). The result showed that, in first weeks, there was no differen_a_on among three groups (because of the parental an_bodies). A□er first week the an_body concentra_on increased gradually in vaccinate group and vaccine-amino acid group but there was not significant differen_a_on between these two groups. But surprisingly the poultry in vaccine-amino acid group gained more weight and less casual_es. Final weight in control group, vaccinated group and vaccine-amino acid group were 2500, 2750 and 2870 gram respec_vely. Casualty in the control group was10%, in the vaccinate group was 2.7% and finally in the vaccine-amino acid group was 2%.

Refrences:

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