

EFFECTS OF CA-AMINOPLEX INJECTION ON SOME PRODUCTIVE PERFORMANCE AND IMMUNE RESPONSE OF BROILER CHICKS

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ABSTRACT

One hundred twenty unsexed one-day old, Hubbard broiler chicks were randomly divided into 4 treatments in 3 replicates with 10 chicks each (4 treatments X 3 replicates X 10 chicks = 120 chicks). The experimental period was divided into two feeding phases, starter (from 0-3 weeks of age) and grower (from 4-6 weeks of age). The basal experimental diets were of 23.33 and 20.42% crude protein and 3115 and 3162 Kcal ME/kg diet for the starter and the grower diet, respectively. The experiment was included four treatments. Chicks in treatment 1 were not injected with Ca-Aminoplex and served as a control treatment; while chicks in treatment 2 were injected muscularly with 0.3 ml of Ca-Aminoplex at the beginning of the 2nd week, whereas chicks in treatment 3 were injected muscularly with 0.3 and 0.4 ml Ca-Aminoplex at the beginning of 2nd and 4th weeks, respectively. In treatment 4, chicks were injected muscularly with 0.3, 0.4 and 0.5 ml of Ca-Aminoplex at the beginning of 2nd, 4th and 6th weeks of age, respectively. At 6 weeks of age, five chicks from each treatment were injected intravenously with 0.2 ml of suspension of packed sheep red blood cells (SRBC). Sera were collected on the seventh day post immunization and antibody titer against SRBC was determined. Results obtained could be summarized as follow:

- All injected groups with Ca-Aminoplex were heavier ($P < 0.05$) in body weight at the end of 2nd week than the control group, while at the end of 4th and 6th weeks the injected groups with Ca-Aminoplex two and three times being heavier ($P < 0.05$) than the control and one injected groups.
- The injected groups with Ca-Aminoplex two or three times were higher ($P < 0.05$) in daily gain and feed intake and better ($P < 0.05$) in feed conversion at 4-6 and 0-6 weeks of age compared to control and injected one time groups.
- The injection with Ca-Aminoplex two or three times decreased ($P < 0.05$) the cost of diet/kg gain, increased the cost of diet/ bird and recorded the highest ($P < 0.05$) net revenue compared to the control or one injected groups.
- The injection of Ca-Aminoplex led to significantly ($P < 0.05$) effect on Ab. in the serum at the 7th week of age, being higher in the group injected with Ca-Aminoplex three times than the other groups. Furthermore, the injected group with Ca-Aminoplex two times was higher ($P < 0.05$) than the control and one injected groups.

It could be concluded that, using Ca-Aminoplex two or three times improved broiler performance and immune response.