Effect of inulin inclusion in low-phosphorus diets on some hematological and immunological parameters and broiler chicken performance

*A. Nabizadeh1

1Azad University, Animal Science, Bojnourd, Iran, Islamic Republic of

After sexing, 224 day-old male Ross 308 broiler chicks were randomly allotted to 4 treatments with 4 replicates of 14 chicks each. The birds were offered the following diets for 42 days: positive control (NPP level equal Ross Broiler Nutrition Specification, 2007), negative control (NPP level 30% less), negative control+0.5% inulin, and negative control+1% inulin. Body weight gain, livability and EPEF were not affected by dietary inulin in low phosphorus diets throughout the experiment. Feed conversion ratio significantly improved when diet supplemented with 0.5 and 1 percent inulin compared with the controls. Indices of main immune organs were not affected in birds fed diets with inulin supplement in comparison with the controls. Total anti-SRBC and IgM titers of broiler chickens significantly increased at 35 days of age when birds fed low phosphorus diets. Inulin supplementation significantly increased total anti-SRBC and IgG in broiler chickens at 35 days of age. There was no significant differences in Hemoglobin concentration and Red blood cells, but the differences in white blood cells, heterophils, lymphocytes, and heterophils to lymphocytes were significant.