

A Comparative Evaluation of Broiler Strains Chickens, Arbor Acres, and Ross in Experimental Coccidiosis

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Abstract : The study was initiated to compare the production and defecation of Eimerial oocysts of two internationally reputed broiler strains under the local environmental and management conditions. 40 one-day old male chickens of Arbor Acres strain and ROSS strain (20 chicks from each strain) used in this study and were divided randomly into four control and challenge groups. Feed and water were provided for ad libitum consumption. At 15 d of age, chickens of challenge groups (from each strain) were individually inoculated with a mixture of 50000 of sporulated oocysts of 4 species including of *E. acervulina* (20%), *E. maxima* (40%), *E. tenella* (25%) and *E. necatrix* (15%) and also from the fourth day after Eimerial challenge, faecal droppings (litter samples) were collected 10 days consecutively for counting oocyst per gram (OPG). The results indicated that in the challenge groups, there was an increasing process of OPG in days of 4 to 7 post challenging and the pick level of OPG was seen at seventh day after challenging. From day 8 to 9, decreasing of OPG was happened. This decreasing continues with mild, fast and mild process to day of 13. Respectively and totally the average of OPG in the Arbor Acres group was lower than the group Ross in all days post inoculation and this difference was significant according to t-test. According to the obtained results in this study and since oocyst index almost always is considered as one of the most important indicators for coccidiosis evaluation, it can be realized that in the same surveillance condition the regarding the severity evaluation of coccidiosis, Arbor Acres strain broilers shed less oocysts than Ross strain broilers.

Keywords : arbor acres, ross, coccidiosis, OPG

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