**INFLUENCE OF PERIODICAL COLD CONDITIONING DURING INCUBATION ON ASCITES INCIDENCE IN BROILERS**

M. H. Shahir\*, O. Afsarian, H. Lotfolahian, A. Hoseini, A. Lourens, A. Akhlaghi and N. Mousavi

*\**Department of Animal Science, University of Zanjan, Zanjan, Iran

Due to genetic selection for rapid growth and low feed conversion ratio, the broiler capacity to survive in low ambient temperature has been decreased, leading to increased ascites incidence. One solution to this problem is cold conditiong (CC) during incubation period. This experiment was conducted to evaluate the effects of a periodical cold conditioning (PCC) during incubation on ascites incidence in broilers. A total of 2,400 hatching eggs were randomly assigned to 2 treatment groups (16 replicates of 75 eggs per treatment). The eggs were incubated at a constant temperature of 37.8˚C throughout the incubation period (control) or were periodically cold conditioned (PCC) on days 11, 13, 15, and 17 of incubation. After hatching, 240 one-day-old male broiler chicks from both treatment groups were reared for 42 d. In order to induce ascites, all chicks were exposed to a 15˚C room temperature from 14 d onwards. Results showed that second grade chicks and yolk sac weight were decreased, and final body weight was increased in the PCC group (P<0.05). Ascites mortality rate was decreased in PCC group (P<0.01). In conclusion, the results showed that the PCC during incubation was associated with improved hatchability, chick quality, and productive performance of broilers and decreased ascites incidence during post hatch cold exposure.