Journal of Research in Ecology

ISSN No: Print: 2319 –1546; Online: 2319-1554

An International Scientific Research Journal

The influence of electric stimulation shock on the embryonic development and behavioral traits in chicks embryo

Authors:
Abdulateef SM[1], Majid AA[1], Mohammed Th. T[1] and Abdulateef FM[2]

Institution:
1.Animal Production, College of Agriculture, University of Anbar, Ramadi, Iraq.

2. Ministry of Agriculture, Directorate of Anbar Agriculture, Ramadi, Iraq.

Corresponding author:
Abdulateef SM

ABSTRACT:

The aim of this experiment was to study the effect of dormancy during the incubation period, the hypothesis behind this concept was giving some stimuli to develop embryonic growth. This study was conducted at the experimental field of the Department of Animal Production, College of Agriculture, University of Anbar, Iraq. 450 eggs (Ross 308) were spread to four treatments each with three duplicates. A voltage device was used to shock the egg, after patterning the eggs with a line of iron filings to confirm electrical conductivity. The eggs were shocked at different times; three times a day that started from one day of hatching. The results showed that a significant changes were noted in the percentage of embryonic weight, percentage of albumin and the percentage of the shells at seventh day post incubation for experimental treatments. A significant change was seen in the percentage of embryonic weight and amniotic sac and liquid, percentage of albumin and yolk was noted at 14 days post incubation for experimental treatments Significant changes in the percentage of embryonic weight and percentage of yolk at 17 days post incubation for experimental treatments were also noted. There was a significant increase ($P<0.01$) in the percentage of membrane penetration, the percentage of tucking and the number of motility for experimental treatment compared with the control. So, it can be concluded that the electrical stimulation develops embryonic growth and adjusts behavioural traits to obtain the best position for successful hatching.

Keywords:
Electric shock, Embryonic development, Behavioral traits, Embryo chicks.