

تأثير بعض العوامل البيئية على بعض صفات الدم في سلالتين محليتين من الدجاج

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EFFECT OF SOME ENVIRONMENTAL FACTORS ON SOME CHEMICAL BLOOD TRAITS IN TWO LOCAL STRAINS OF CHICKENS

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ABSTRACT: *The present study was carried out at the Poultry Research Farm, Department of Poultry Production, Faculty of Agriculture Minufiya University at Shibin El-Kom, This experiment was designed to study the effect of different light colors (Incandescent, Fluorescent and Infrared light) and vitamin E supplementation on some blood characteristics. The first group was exposed to incandescent light (control), the second was exposed to fluorescent light, and the third one was exposed to infrared light. All birds under light treatments were exposed to lighting period for 14 hours / day. Each group was divided into two subgroups, the first: vitamin E 1ml (20.000IU) added to one liter of their drinking water for 5 day/wk, whereas the second one consumes drink water without vitamin E. The numbers of treatments were 12 (6 treatments for each strain).*

The obtained results were summarized as follows:-

Results indicated that fluorescent light without vitamin E recorded the best blood characters of males meanwhile, in female birds provided under infrared light with vitamin E had the highest of most blood traits in Sinai strain. However, without vitamin E supplementation, males under infrared light were better blood characters in Norfa strain. While, birds recorded fluorescent light with vitamin E the best in female.

There were no significant difference among light colors blood cells, GPT, GOT and platelets. While, the difference between light colors on white blood cells was highly significant ($P < 0.01$). The interaction between (color × strain), (treatment × strain), (color × treatment × sex × strain) and (color × treatment × strain) in hemoglobin (Hb), red blood cells (RBCs), hematocrit value (HCT), white blood cells (WBCs) and platelets value (PLT) were not significant. While, All interaction effects such as (treatment × sex × strain), (sex × strain) and (color × sex) in Hb were highly significant ($P < 0.01$).

The correlation coefficient between blood characteristics under the effect of light color , vitamin E, strain and sex were mostly positive and no significant or high significant. But, only few traits had negative correlation coefficient between each other.

Key words: *light colors, vitamin E, blood traits, local stains, chickens*