Using Light: Dark Time And Period To Alleviate The Heat Stress On Growing New Zealand White Rabbits During Hot Weather

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Abstract:

In this study, the light: dark program was used for raising growing rabbits during summer season under hot climatic conditions. Sixty four growing New Zealand white rabbits, four weeks old, were randomly divided into four experimental groups (16 rabbit/group): The rabbits of first and second groups (C and T1), were exposed to 12 h light during 1000 to 2200 and 2200 to 1000 h, respectively. The third and fourth groups (T2 and T3), were exposed to 8h light during 1000 to 1800 and 2200 to 0600 h, respectively. Rabbits were reared under the same managerial, feeding and hygienic conditions throughout the experimental period. Besides, body weight (BW), body weight gains (BWG), feed intake (FI), feed conversion (FC), carcass traits, blood parameters and economical efficiency were estimated in this study. The achieved results confirmed that the productive traits (BW, BWG, FI and FCR) and economical efficiency of New Zealand white rabbits during the summer were better in the T3 group (8 h/day light during 2200 to 0600) than other groups. Also, the values of AST, ALT, N / L Ratio, rectal temperature and mortality rate were significantly lower in T3 group. Furthermore, lymphocyte, hematocrit, albumin and glucose increased relatively in groups exposed to photoperiod during afternoon. While, no significant differences were existed in blood protein, lipids, globulin, cholesterol and carcass traits percentages. Generally, it could be concluded that using short photoperiod during afternoon in rabbits farms owing to its beneficial effects on the productive traits of growing rabbits as well as lowering of electricity consumption (better economical efficiency).

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