THE PROTECTIVE EFFICACY OF ANTIOXIDANTS AGAINST THE HARMFUL EFFECTS OF GIBBERELLIC ACID (GA3) ON PERFORMANCE OF NEW ZEALAND RABBITS

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Abstract:

A total of forty eight, 8 weeks old, unsexed, New Zealand white rabbits (NZW) were, randomly, distributed into four groups (12 rabbit each) to examine the effect of Gibberellic acid (GA3) and/or antioxidants (AO) on the productive and reproductive performance. During experimental period, groups 1, 2 and 3 were given 75 mg of GA3/liter, 100 IU of vitamin E/liter and mixture of GA3 & V. E with the same level in drinking water, respectively. While, the fourth group was used as a control (without any additive in drinking water). Generally, the obtained results exhibited that GA3 & VE treated groups were significantly (P 0.05) better during growing period than that in reproductive period. Significant (P 0.05) effects were observed in body weight (g), daily gain (g/d), feed conversion ratio, dressed carcass, liver percentages and economical efficiency in treated groups compared to control group. Conception rate and litter size at birth, 4 and 8 weeks of age as well as healthy disorders were significantly (P 0.05) increased in V. E treated group and control than that in GA3 treated group. On the other hand, no significant differences were demonstrated in feed intake, gestation period, bunny weight at birth, 4 and 8 weeks of age and pre-weaning mortality rate. In conclusion, using Gibberellic acid and antioxidants as a water supplement confirm nonharmful effect during growing period, while, using antioxidants (V. E) as water supplement is beneficial factor during reproductive period.

Keywords:

Rabbits, Gibberellic acid, antioxidant, growth and reproductive performance.

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