

Effect of Vitamin E and Selenium Supplementation on Hatchability, Fertility and Performance of Broiler Breeders

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The present study was conducted to determine the effect of vitamin E and selenium supplementation on the hatchability, fertility and performance of broiler breeders. A total of 42 weeks old 198 Cobb 500 birds were randomly assigned to 18 deep litter pens (10 females and 1 male per pen) and were supplemented for two months of period. Broiler breeders were randomly assigned to three treatments and six replicates. The control group (T₀) received only water. The birds from treatment 1 (T₁) and treatment 2 (T₂) were supplemented with 10 mg L⁻¹ pure vitamin E and 50 mg/1 L Selenium with vitamin E. The lowest ($p < 0.05$) hatchability (77%) was recorded from T₀ treatment and the highest ($p < 0.05$) hatchability (88%) was recorded from T₁ treatment. The lowest ($p < 0.05$) fertility (86%) was recorded from T₀ treatment and highest ($p < 0.05$) fertility (93%) was recorded from T₁ treatment. The lowest ($p < 0.05$) growth performance (87%) was recorded from T₀ treatment and the highest ($p < 0.05$) growth performance (98%) was recorded from T₁ treatment. There were no significant differences of total egg production, weekly average feed conversion ratio and weekly average weight gain of broiler breeders between three dietary treatments ($p > 0.05$). In conclusion the hatchability, fertility and performance of broilers were increased by dietary supplementation on said amount of selenium supplementation (50 mg L⁻¹) than pure vitamin E (10 mg L⁻¹).

Keywords: fertility, hatchability, Performance, Selenium supplementation, Vitamin E