

Effect of magnetized water on certain seminal plasma traits of Hy – Line Brown roosters

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ABSTRACT

This experiment was conducted at the poultry house / Department of Animal Resources / College of Agriculture, University of Sulaimanya during the period from 1/8/2007 to 1/6/2008 to investigate the effect of different intensities of magnetically treated water on seminal plasma traits of roosters. A total of 80 Hy – Line Brown cocks, 22 weeks old were used in this experiment. Cocks were randomly distributed into 4 treatment groups of 4 replicates each. Each treatment group constitutes 20 cocks with 5 cocks for each replicate. Experimental treatments included in this experiment were: Treatment 1: roosters drank magnetically treated water which passed through magnetic device with strength of 500 gauss, treatment 2: roosters drank magnetically treated water which passed through magnetic device with strength of 1000 gauss, treatment 3: roosters drank magnetically treated water which passed through magnetic device with strength of 2000 gauss, and treatment 4: roosters drank normal water without magnetism which considered as control group. Seminal plasma traits included in this experiment were: concentrations of seminal plasma glucose, protein, cholesterol, and activities of GOT, GPT, alkaline phosphatase and acid phosphatase. Results revealed that treated the cocks with magnetically treated water resulted in highly significant ($p < 0.01$) decrease as concerns the concentrations of seminal plasma glucose, protein, cholesterol and activity of GOT and GPT

enzymes and highly significant ($p < 0.01$) increase in regard to the activity of alkaline phosphatase and acid phosphatase enzymes in seminal plasma. However, T3 (2000 Gauss) recorded the best results in relation to all seminal plasma traits included in this experiment. In conclusion, treated the cocks with magnetically treated water resulted in significant improvement in reproductive performance of cocks as indicated by the increase of positive components of seminal plasma constituents and the decrease of negative components of seminal plasma constituents. Therefore, magnetized water technique can be used as one of important tools for enhancing the reproductive efficiency of roosters.