

# **EFFECT OF DIETARY SUPPLEMENTATION WITH DIFFERENT LEVEL OF OAT POWDER ON CERTAIN SEMEN TRAITS OF ROOSTERS .**

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## **ABSTRACT**

This study was conducted at the Poultry Farm of Animal Resources Department, College of Agriculture, University of Sulaimany to investigate the effect of dietary supplementation with different levels of oat powder on certain semen traits roosters. A total of 48 Bovans Goldline layer breeder roosters 16 weeks old were used in this study. Roosters were randomly allocated for 4 treatments with 3 each and each replicate consisted of 4 birds (12 roosters for each treatment). Treatments of experiment were as follows: Treatment 1, Control group (C), and treatments 2, 3, or 4 (T1, T2, or T3) represented roosters fed diets supplemented with 2, 4, or 6 kg of oat powder / ton of diet, respectively. Birds were fed these diets for 16 weeks including the preliminary period which lasted 4 weeks. Semen traits included in this experiment were semen volume, mass activity and individual motility of spermatozoa, percentages of abnormal, dead spermatozoa and acrosomal abnormalities, spermatozoa concentration, and spermatocrit. Results revealed that supplementation of roosters ration with oat powder (T1, T2, or T3) result in significant increase ( $p < 0.05$ ) in semen volume, mass activity and individual motility of spermatozoa, sperm concentration and spermatocrit and significant decrease ( $p < 0.05$ ) in percentages of dead and abnormal spermatozoa and acrosomal abnormalities during all the periods of experiment and as regards total means of these traits. However, regarding the age of roosters it was noticed that there were significant increases ( $p < 0.05$ ) in semen volume, mass activity and individual motility of spermatozoa, sperm concentration and spermatocrit and significant decreases ( $p < 0.05$ ) in percentages of dead and abnormal spermatozoa and acrosomal abnormalities with the advancement in age of roosters. Furthermore, there were no significant interactions between treatments and age of roosters with relation to all traits involved in this study. On the other hand, T3 (6 kg oat powder / ton of feed) surpasses other treatments included in this experiment with respect to all semen parameters included in this study. In conclusion the addition of oat to the diet of roosters result in significant improvement in semen traits therefore oat powder could be used as effective tool for improving reproductive performance of roosters.

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