

Effect of Organic Zinc in Supplement Diet on Some Reproductive Hormones and Fertility in Laboratory Mice

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Abstract : Appropriate nutrition is necessary today for desire reproduction and profitable livestock industry. Minerals including zinc element are from nutritional factors. Studies show that zinc plays an important role in reproduction process and secretion of reproductive hormones. This study was carried out to determine the effects of organic zinc on some reproductive hormones, fertility of male mice. The study was done as completely randomized design with one control and six treatment groups. Seventy male mature mice were kept for 35 days to adapt to environment and then divided in seven groups with ten replications. Samples received zinc (organic) daily in 50,100, and 150 ppm doses of each type for 35 days. At the end, blood samples were taken to measure LH, FSH, and testosterone hormones. Meanwhile, fertility rates were measured. Results were analyzed using one way ANOVA and means were compared using Duncan multiple ranges test at 5% probability level. According to results, LH concentration of all groups except 50 ppm was increased significantly ($p < 0.05$). FSH amount was increased significantly ($p < 0.05$) in 100 ppm mineral group and reduced in 50 ppm mineral but was not changed in other groups.

Keywords : organic supplements, zinc, reproductive hormones, fertility

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