

Saowalak Suwan 2009: The Effect of Dietary Superoxide Dismutase and Selenium Supplementation on Boar Semen Quality. Master of Science (Animal Production), Major Field: Animal Production, Department of Animal Science. Thesis Advisor: Associate Professor Srisuwan Chomchai, M.S. 53 pages.

The experiment was conducted to investigate the effect of dietary superoxide dismutase and selenium supplementation on boar semen quality. Fifteen Duroc boars, average 24 months of age, were allocated randomly into 3 treatments. Each treatment consisted of five boars. All treatments were fed with gestation sow diet (basal feed). The boars in treatment 1 were provided with basal feed (control group), treatment 2 basal feed + 200 mg. /day of superoxide dismutase and treatment 3 basal feed + 200 mg. /day of superoxide dismutase + 0.3 ppm. of selenium in the diet. The results indicated that the boars in treatment 2 and 3 had higher live sperm and lower cytoplasmic droplet ($P < 0.05$) than control group. Selenium concentration in serum of the boars in treatment 3 at 45th day of experiment were higher than control group and treatment 2 ($P < 0.01$). Activity of superoxide dismutase in serum of the boars in treatment 2 and 3 at 90th day of the experiment were lower than control group ($P < 0.05$). There were not significant difference ($P > 0.05$) of color, pH, sperm concentration, semen volume, total sperm per ejaculation, motile sperm, average path velocity (VAP), curvilinear velocity (VCL), straight line velocity (VSL), percentage of progressive movement, percentage of abnormal sperm head and tail among treatment.

Student's signature

Thesis Advisor's signature

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