

Thanakorn Petchpumpoung 2010: Effect of Dietary Chitooligosaccharide  
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. 57 pages.

The experiment was conducted to investigate the effect of dietary chitooligosaccharide 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 boar diet (basal feed). The boars in treatment 1 were provided with basal feed (control group), treatment 2 basal feed + 200 ppm/day of chitooligosaccharide formula 1 and treatment 3 basal feed + 200 ppm/day of chitooligosaccharide formula 2 in the diet. The results indicated that the boars in treatment 2 and 3 had higher percentage of progressive movement, straight line velocity (VSL), and lower percentage of abnormal sperm head ( $P < 0.05$ ) than control group and the boars in treatment 2 and 3 had higher percentage of live sperm ( $P < 0.01$ ) than control group. 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), percentage of abnormal sperm tail and cytoplasmic droplet among treatment. Percentage of antioxidant activity in seminal plasma of the boars in all treatment were not significantly different ( $P > 0.05$ ).

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Thesis Advisor's signature