

Piyarat Jun-On 2013: Effects of Cryoprotectants and Vitamin E on Quality of Three-yellow Cocks Frozen Semen. Master of Science (Animal Production), Major Field: Animal Production, Department of Animal Science. Thesis Advisor: Associate Professor Voravit Siripholvat, Ph.D. 80 pages.

Semen was collected from 10 Three-yellow Cocks by a massage technique. Pooled semen was treated to determine the effect of cryoprotectant (experiment 1) and the effect of freezing protocol and vitamin E on frozen/thawed semen quality (experiment 2). In experiment 1, semen was diluted and frozen in 6 treatments: SP-TALP + 6% DMSO, SP-TALP + 8% DMSO, SP-TALP + 10% DMSO and SP-TALP + 6% EG, SP-TALP + 8% EG, SP-TALP + 10% EG. The superior result as followed was obtained by using SP-TALP + 10% EG : motility, morphological normal, head abnormal, midpiece abnormal tail abnormal and death equal 51.17%, 56.50 %, 13.42 %, 13.58 %, 16.50 % and 35.17 % respectively.

In experiment 2, SP-TALP was used as a basis extender. Semen was diluted and frozen in 4 treatments: 10% EG+Vit E 0, 10% EG+Vit E 4, 10% EG+Vit E 8 and 10% EG+Vit E 12 $\mu\text{l/ml}$. The result show 10% EG+Vit E 4 $\mu\text{l/ml}$ was the best: morphological normal, head abnormal, midpiece abnormal and death equal 48.33 %, 16.83 %, 12.50 % and 54.33 % respectively.

This study indicated that from in vitro analysis, SP-TALP with 10% EG+Vit E 4 $\mu\text{l/ml}$ was the cryoprotectants of choice for cryopreservation three-yellow cock.

Student's signature

Thesis Advisor's signature