Vanida Manthanom 2009: Effect of Seasons and Breeds on Goat Semen Quality under Tropical Conditions. Master of Science (Animal Production), Major Field: Animal Production, Department of Animal Science. Thesis Advisor: Associate Professor Kanchana Markvichitr, Dr.Med.Vet. 95 pages.

This study was purposed to determine the effect of seasons and breeds on goat semen quality under tropical conditions. The experiment was conducted according to repeated measurements in completely randomized design . Three seasons including winter season (November to February), summer (March to June) and rainy season (July to October) were assigned in main plot and two breed goats including three male Angonubian-Thai native crossbreed goats and also three male Thai native goats were assigned for sub plot. The feeding regimen was given with total mixed ration (TMR) and paragrass forage adlibitum supplementation. The proximate analysis of dietary composition, biochemical composition in plasma, semen quality and also malondialdehyde were determined and statistical analyzed seasonally throughout all year round of experimental period.

The result revealed that effect on seasons and breeds play an important interaction on goat semen quality mainly such in progressive motility and concentration. The effect on season to semen quality parameter in motility, live sperm, average path velocity progressive velocity and curvilinear velocity in the rainy season was significantly higher than in winter and summer season respectively ($P<0.01$). The Angonubian Thai native crossbreed goats semen volume was significantly higher than Thai native goat's ($P<0.01$). There was no interaction of plasma biochemical composition to be apparent factor on seasons and breeds. Total of white blood cell, red blood cell, hemoglobin, hematocrit, neutrophill, lymphocyte and blood urea nitrogen parameters between breeds throughout of year seasons revealed non significantly different and also the study of malondialdehyde parameter shown to be non significantly ($P>0.05$), however blood glucose in rainy season revealed higher than significantly ($p<0.01$) in winter season and summer season.

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