RINGKASAN

ANWARRUDIN "Pengaruh lama *Post Thawing* terhadap Abnormalitas, pH dan Viabilitas Spermatozoa pada Semen Beku Kambing Boer". Penelitian dilaksanakan di Laboratorium Fisiologi dan Reproduksi Ternak Terapan, Fakultas Peternakan, Universitas Jenderal Soedirman, Purwokerto pada tanggal 13 - 17 Februari 2017. Penelitian ini bertujuan untuk mengetahui pengaruh waktu *post thawing* semen beku Kambing Boer terhadap abnormalitas, pH dan viabilitas spermatozoa. Metode penelitian yang digunakan adalah metode eksperimen dengan menggunakan Rancangan Acak Lengkap (RAL). Perlakuan yang diuji adalah waktu *post thawing* semen beku di *thawing* pada (suhu 37°C selama 30 detik) semen beku yang terdiri atas P_0: waktu *post thawing* 0 menit, P_1: waktu *post thawing* 30 menit, P_2: waktu *post thawing* 60 menit, P_3: waktu *post thawing* 90 menit. Setiap perlakuan diulang sebanyak enam kali. Peubah yang diukur adalah abnormalitas, pH dan viabilitas spermatozoa. Data yang diperoleh dianalisis menggunakan analisis variansi dan dilanjutkan dengan uji *orthogonal polynomial* dan uji BNJ. Hasil rataan abnormalitas spermatozoa yaitu P_0: 6,50 ± 2,66%; P_1: 8,92 ± 2,69%; P_2: 10,83 ± 1,75%; P_3: 12,33 ± 1,25%. Hasil analisis variansi menunjukkan bahwa waktu *post thawing* berpengaruh sangat nyata ($P<0,01$) terhadap abnormalitas spermatozoa dan menunjukkan pengaruh linier yang sangat nyata ($P<0,01$) setelah diuji lanjut *orthogonal polynomial*. Berdasar uji lanjut BNJ diperoleh informasi bahwa perlakuan P_0 vs P_1; P_1 vs P_2; P_2 vs P_3 tidak menunjukkan perbedaan nyata sedangkan perlakuan P_3 vs P_0; P_2 vs P_0; P_1 vs P_3 menunjukkan perbedaan yang nyata. Waktu *post thawing* tidak berpengaruh nyata ($P>0.05$) terhadap pH spermatozoa. Hasil rataan viabilitas spermatozoa adalah P_0 (76,92 ± 4,28); P_1 (71,75 ± 4,24); P_2 (66,50 ± 4,29); P_3 (55,00 ± 3,42). Waktu *post thawing* berpengaruh sangat nyata ($P<0,01$) terhadap viabilitas spermatozoa dan menunjukkan pengaruh linier yang sangat nyata ($P<0,01$) setelah diuji lanjut *orthogonal polynomial*, kemudian berdasar uji lanjut BNJ menunjukkan perbedaan yang nyata antar semua perlakuan. Kesimpulan dari penelitian ini adalah semakin lama waktu *post thawing* dapat meningkatkan abnormalitas dan menurunkan viabilitas spermatozoa spermatozoa namun tidak mempengaruhi pH spermatozoa. Waktu p*ost thawing* semen beku Kambing Boer pada waktu 90 menit masih layak digunakan untuk inseminasi buatan (IB).

SUMMARY

ANWARRUDIN "Effect of post-thawing duration interval on the abnormality, pH and viability of Boer Goat Frozen Semen". The study was conducted at Applied Physiology and Reproduction Laboratory, Animal Science Faculty, University of Jenderal Soedirman, Purwokerto from February 13^{th} – 17^{th}, 2017. The purpose of this study is to determine the effect of several post-thaw duration intervals of Boer goat semen on the abnormality, pH and viability. The study was done experimentally using a Completely Randomized Design and the data were analyzed using ANOVA and honest significant different test. The treatments tested were P_0 : Post-thawing duration for 0 minute, P_1 : Post-thawing duration intervals for 30 minutes, P_2 : Post-thaw duration intervals for 60 minutes and P_3 : Post-thawing duration for 90 minutes. Each treatment were repeated for six times. The parameters that measured were abnormality, pH, and viability. Data were analyzed using analysis of variance and then using orthogonal polynomial test and honest significant different (HSD) test. The result for abnormality of spermatozoa were P_0 6.50 ± 2.66%; P_1 8.92 ± 2.69%; P_2 10.83 ± 1.75%; P_3 12.33 ± 1.25%. The results of analysis of variance showed that the treatment was significant ($P<0.01$) for spermatozoa abnormality. Further test of orthogonal polynomial showed linear effect ($P<0,01$), then HSD test showed the treatment of P_0 vs P_1; P_1 vs P_2; P_2 vs P_3 did not showed difference, whereas the treatment of P_3 vs P_0; P_2 vs P_0; P_1 vs P_3 showed difference. Duration interval did not influence pH ($P>0.05$). The result of spermatozoa viability were P_0: 76.92 ± 4.28%; P_1: 71.75 ± 4.24%; P_2: 66.50 ± 4.29%; P_3: 55,00 ± 3.42%. The results of analysis of variance showed that the treatment was significant ($P<0.01$) for spermatozoa viability. Further test of orthogonal polynomial showed linear effect ($P<0.01$), then HSD test showed that there were significant difference for all treatments. It can be concluded that the longer post-thawing duration will decrease spermatozoa viability and increase spermatozoa abnormality. Post thawing time of Boer goat frozen semen less than 90 minutes is still feasible for artificial insemination.