RINGKASAN

ANDRI SETIAWAN. Penelitian bertujuan untuk meneliti pengaruh interaksi metode *thawing* dan lama *post thawing* terhadap motilitas dan viabilitas semen sapi Simmental. Prosedur penelitian menggunakan 24 straw sapi Simmental yang di *thawing* dengan metode SOP pada suhu 37^0C selama 30 detik atau air PAM pada suhu 30^0C selama 30 detik dengan lama *post thawing* 30, 60 dan 90 menit. Metode penelitian yang digunakan adalah metode eksperimen dengan Rancangan Acak Lengkap (RAL) pola faktorial 2x3, sehingga terdapat 6 perlakuan dengan ulangan 4 kali. Peubah yang diukur adalah persentase motilitas dan viabilitas spermatozoa. Perlakuan yang diteliti adalah m_1l_1 (metode *thawing* SOP (37^0C) selama 30 detik + Lama *post thawing* 30 menit), m_1l_2 (metode *thawing* SOP (37^0C) selama 30 detik + Lama *post thawing* 60 menit), m_1l_3 (metode *thawing* SOP (37^0C) selama 30 detik + Lama *post thawing* 90 menit), m_2l_1 (metode *thawing* air PAM (30^0C) selama 30 detik + Lama *post thawing* 30 menit), m_2l_2 (metode *thawing* air PAM (30^0C) selama 30 detik + Lama *post thawing* 60 menit.), m_2l_3 (metode *thawing* air PAM (30^0C) selama 30 detik + Lama *post thawing* 90 menit). Hasil penelitian menunjukkan interaksi antara metode *thawing* dan lama *post thawing* tidak berpengaruh nyata ($P>0,05$) terhadap motilitas dan viabilitas spermatozoa. Namun lama *post thawing* berpengaruh nyata ($P<0,05$) menurunkan persentase motilitas dan viabilitas spermatozoa. Rataan persentase motilitas spermatozoa perlakuan m1l1, m1l2, m1l3 dan m2l1, m2l2, m2l3 masing-masing 42,50 ± 2,9%, 32,50 ± 2,9%, 27,50 ± 2,9% dan 36,30 ± 2,5%, 26,30 ± 2,5%, 21,30 ± 2,5%, sedangkan rataan persentase viabilitas spermatozoa perlakuan m1l1, m1l2, m1l3 and m2l1, m2l2, m2l3 masing-masing 53,80 ± 2,5%, 42,50 ± 2,5%, 37,50 ± 2,5% and 47,50 ± 2,5%, 32,50 ± 2,9%, 47,50 ± 2,9%. Berdasarkan hasil penelitian dapat disimpulkan bahwa motilitas dan viabilitas spermatozoa terbaik diperoleh dengan metode *thawing* secara SOP pada suhu 37^0C selama 30 detik dan *post thawing* 30 menit dengan metode *thawing* SOP pada suhu 37^0C menunjukkan kualitas semen yang masih layak untuk di inseminasikan.

SUMMARY

ANDRI SETIAWAN. The aim of this research was to investigate interaction between thawing methods and post thawing duration on motility and viability of Simmental cattle straw. The research procedure used 24 straws of Simmental cattle thawed using procedure operational standard (SNI) at temperature 37^0C for 30 seconds or tap water at temperature 30^0C for 30 seconds with post thawing duration 30, 60 and 90 minutes. The research method used completely randomized design (CRD) with 2 x 3 factorial pattern, there were 6 treatments, each treatment was replicated 4 times. The parameters measured were percentage of motility and viability of sperm. The treatments studied were m1l1 (thawed using Procedure Operational Standard (SNI) (37^0C) for 30 seconds + post thawing for 30 minute). m1l2 (thawed using Procedure Operational Standard (SNI) (37^0C) for 30 seconds + post thawing for 60 minute). m1l3 (thawed using Procedure Operational Standard (SNI) (37^0C) for 30 seconds + post thawing for 90 minute). m2l1 (thawed using tap water (30^0C) for 30 seconds + post thawing for 30 minute). m2l2 (thawed using tap water (30^0C) for 30 seconds + post thawing 60 minute). m2l3 (thawed using tap water (30^0C) for 30 seconds + post thawing for 90 minute). The results showed that interaction between thawing method and post thawing duration did not significantly affect ($P>0.05$) on motility and viability of spermatozoa. However, post thawing duration was significantly ($P<0.05$) decrease motility and viability of spermatozoa. Means ± sd of motility of spermatozoa for m1l1, m1l2, m1l3 and m2l1, m2l2, m2l3 were 42.50 ± 2.9%, 32.50 ± 2.9%, 27.50 ± 2.9% and 36.30 ± 2.5%, 26.30 ± 2.5%, 21.30 ± 2.5% respectively. Means ± sd of viability of spermatozoa for m1l1, m1l2, m1l3 and m2l1, m2l2, m2l3 were 53.80 ± 2.5%, 42.50 ± 2.5%, 37.50 ± 2.5% and 47.50 ± 2.5%, 32.50 ± 2.9%, 47.50 ± 2.9% respectively. It could be concluded that the best spermatozoa motility and viability is obtained by thawing method using procedure operational standar (SNI) at temperature 37^0C for 30 seconds and post thawing duration of 30 minutes with thawing method using procedure operational standard (SNI) at temperature 37^0C for 30 seconds indicates the quality of sperm still feasible for insemination.