

PENGARUH BANGSA SAPI LOKAL TERHADAP KUALITAS SEMEN DI BALAI INSEMINASI BUATAN LEMBANG

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh bangsa sapi lokal terhadap kualitas *semen* di Balai Inseminasi Buatan Lembang, Bandung, Jawa Barat. Penelitian ini menggunakan data sekunder kualitas *semen* segar dan *post-thawing motility* (PTM) sapi pejantan lokal dari bulan Januari sampai Desember 2020. Pejantan sapi lokal yang digunakan terdiri dari 2 ekor pejantan Sapi Aceh, Sapi Pasundan, Sapi Peranakan Ongole (PO), dan Sapi Madura pada umur 4 sampai 8 tahun. Peubah yang diamati berupa kualitas *semen* segar meliputi volume, warna, konsistensi, pH, motilitas, gerak massa, dan konsentrasi, serta PTM *semen* beku. Data dianalisis menggunakan metode *one way ANOVA* dan uji lanjut *Duncan*. Hasil menunjukkan adanya perbedaan nyata ($P < 0,05$) pada volume, pH, motilitas, konsentrasi *semen* segar serta nilai PTM *semen* beku antar bangsa sapi pejantan lokal. Sapi Aceh memiliki rerata volume $3,87 \pm 1,29$ ml; warna $3,78 \pm 0,69$ krem cenderung putih susu; konsistensi $1,78 \pm 0,42$ sedang; pH $6,51 \pm 0,17$; motilitas $66,05 \pm 14,46\%$; gerak massa $1,85 \pm 0,41$ atau (++); konsentrasi $990,45 \pm 266,08$ juta/ml; dan PTM $41,00 \pm 2,00\%$. Sapi Pasundan memiliki rerata volume $5,45 \pm 1,92$ ml; warna $3,81 \pm 0,49$ krem cenderung putih susu; konsistensi $1,79 \pm 0,40$ sedang; pH $6,49 \pm 0,15$; motilitas $66,55 \pm 11,37\%$; gerak massa $1,85 \pm 0,37$ atau (++); konsentrasi $1014,33 \pm 231,80$ juta/ml; dan PTM $40,42 \pm 1,39\%$. Sapi PO memiliki rerata volume $5,56 \pm 1,55$ ml; warna $3,79 \pm 0,46$ krem cenderung putih susu; konsistensi $1,80 \pm 0,39$ sedang; pH $6,47 \pm 0,23$; motilitas $69,57 \pm 6,42\%$; gerak massa $1,95 \pm 0,23$ atau (++); konsentrasi $995,56 \pm 271,70$ juta/ml; dan PTM $41,32 \pm 2,21\%$. Sapi Madura memiliki rerata volume $6,01 \pm 2,22$ ml; warna $3,74 \pm 0,49$ krem cenderung putih susu; konsistensi $1,71 \pm 0,45$ sedang; pH $6,52 \pm 0,17$; motilitas $69,21 \pm 6,90\%$; gerak massa $1,97 \pm 0,18$ atau (++); konsentrasi $998,72 \pm 202,43$ juta/ml; dan PTM $40,65 \pm 1,68$. Disimpulkan bahwa variasi bangsa sapi pejantan lokal mempengaruhi volume, pH, motilitas, konsentrasi *semen* segar serta nilai PTM *semen* beku yang dihasilkan.

Kata kunci: bangsa sapi lokal jantan, kualitas *semen* segar, *post-thawing motility semen* beku.

THE EFFECT OF BREED of LOCAL BULL ON SEMEN QUALITY IN THE LEMBANG ARTIFICIAL INSEMINATION CENTRE

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ABSTRACT

This research was aimed to determine the effect of breed Local bull on semen quality in the Artificial Insemination Centre (AIC) of Lembang, Bandung, West Java. This research used secondary data of local bull fresh semen quality and post-thawing motility from January to December 2020. Local bull used in this research consisted of Aceh, Pasundan, Ongole crossbreed, and Madura Bull aged 4 to 8 years old which each breed consisted of two bulls. The observed variables are volume, colors, consistency, pH, motility, mass motility, concentration for the fresh semen quality and post-thawing motility of the frozen semen. Data was analyzed with one way ANOVA method and Duncan post hoc test. The results showed that bull breed affect the volume, pH, motility, and mass motility of fresh semen and post-thawing motility of the frozen semen ($P < 0,05$). Aceh bull has average volume $3,87 \pm 1,29$ ml; color $3,78 \pm 0,69$ cream to milky white; consistency $1,78 \pm 0,42$ moderate; pH $6,51 \pm 0,17$; motility $66,05 \pm 14,46\%$; mass motility $1,85 \pm 0,41$ or (++) ; concentration $990,45 \pm 266,08$ $10^9/\text{ml}$; and PTM $41,00 \pm 2,00\%$. Pasundan bull has average volume $5,45 \pm 1,92$ ml; color $3,81 \pm 0,49$ cream to milky white; consistency $1,79 \pm 0,40$ moderate; pH $6,49 \pm 0,15$; motility $66,55 \pm 11,37\%$; mass motility $1,85 \pm 0,37$ or (++) ; concentration $1014,33 \pm 231,80$ $10^9/\text{ml}$; and PTM $40,42 \pm 1,39\%$. Ongole crossbreed has average volume $5,56 \pm 1,55$ ml; color $3,79 \pm 0,46$ cream to milky white; consistency $1,80 \pm 0,39$ moderate; pH $6,47 \pm 0,23$; motility $69,57 \pm 6,42\%$; mass motility $1,95 \pm 0,23$ or (++) ; concentration $995,56 \pm 271,70$ $10^9/\text{ml}$; and PTM $41,32 \pm 2,21\%$. Madura bull has average volume $6,01 \pm 2,22$ ml; color $3,74 \pm 0,49$ cream to milky white; consistency $1,71 \pm 0,45$ moderate; pH $6,52 \pm 0,17$; motility $69,21 \pm 6,90\%$; mass motility $1,97 \pm 0,18$ or (++) ; concentration $998,72 \pm 202,43$ $10^9/\text{ml}$; and PTM $40,65 \pm 1,68\%$. It can be concluded that the variance of local bull breed affect the volume, pH, motility, and mass motility of fresh semen and post-thawing motility of the frozen semen.

Keywords: Local bull, fresh semen quality, post-thawing motility of frozen semen.