PENGARUH PENGENCER RINGER LAKTAT DAN AIR KELAPA YANG DIBERI KUNING TELUR AYAM TERHADAP MOTILITAS DAN VIABILITAS *SPERMATOZOA* AYAM KETAWA PADA PENYIMPANAN SUHU 5^{o}C

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh pengencer antara ringer laktat dan air kelapa yang diberi kuning telur ayam terhadap motilitas dan viabilitas *spermatozoa* ayam Ketawa setelah penyimpanan pada suhu 5^{o}C. Penampungan sperma dilakukan 2 kali seminggu, hari Senin dan Kamis. Sperma ditampung dari 3 ekor ayam Ketawa jantan yang berumur 10 sampai 15 bulan dengan metode pengurutan. Sperma hasil penampungan diperiksa kualitas makroskopis dan mikroskopisnya (konsentrasi, motilitas, viabilitas, morfologi *spermatozoa*). Sperma segar setelah diperiksa kualitasnya kemudian diencerkan dengan pengencer ringer laktat + kuning telur (P1) dan air kelapa + kuning telur (P2), kemudian disimpan pada jam ke-0, 6, 12, 24 suhu 5^{o}C. Data yang diperoleh dianalisis menggunakan analisis variansi (ANOVA) dengan rancangan acak lengkap pola faktorial 2x4 yaitu 2 perlakuan pengencer P1x P2 dan variasi lama penyimpanan (0, 6, 12, dan 24 jam). Hasil analisis statistik menunjukkan bahwa kedua pengencer dan lama simpan jam ke-0, 6, 12 dan 24 berpengaruh nyata ($P<0,05$) terhadap motilitas dan viabilitas *spermatozoa* ayam Ketawa. Uji lanjutan menggunakan uji Duncan menunjukkan perbedaan pada setiap level perlakuan. Rata-rata motilitas *spermatozoa* ayam Ketawa dengan pengencer ringer laktat + kuning telur (P1) dan air kelapa + kuning telur (P2) berturut-turut sebesar 63,00 ± 10,16% dan 54,25 ± 16,21%, sedangkan viabilitasnya P1 dan P2 berturut-turut sebesar 66,85 ± 8,56% dan 59,95 ± 9,67%. Rata-rata motilitas pada penyimpanan jam ke-0, 6, 12, 24 berturut-turut sebesar 73,00 ± 1,46%, 64,00 ± 4,24%, 55,00 ± 7,77%, 42,00 ± 11,31%. Rata-rata viabilitas jam ke-0, 6, 12, 24 berturut-turut sebesar 74,60 ± 3,11%, 66,51 ± 5,23%, 58,06 ± 7,59%, 54,42 ± 3,57%. Kesimpulan yang didapat bahwa pengencer ringer laktat + kuning telur lebih baik dibandingkan air kelapa + kuning telur dan mampu bertahan sampai jam ke-24 selama penyimpanan suhu 5^{o}C.

(Kata kunci : ayam Ketawa, *spermatozoa*, ringer laktat, air kelapa, kuning telur ayam, pengencer)

THE EFFECT OF RINGER LACTATE AND COCONUT WATER DILUENT SUPPLEMENTED WITH CHIKEN YOLK ON THE MOTILITY AND VIABILITY *SPERMATOZOA* OF KETAWA CHICKEN STORED AT 5^{O}C

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ABSTRACT

The aim of research was to identify the effect of ringer lactate and coconut water diluent supplemented with chiken yolk on the motility and viability *spermatozoa* of Ketawa chicken stored at 5^{O}C. Semen was collected in the morning, on Monday and Thursday. Semen was collected from 3 male Ketawa chicken age of 10 to 15 month by abdominal massage method. Semen samples were examined macroscopically and microscopically for quality parameters (concentration, motility, viability and morphological defect rates of *spermatozoa*). Hereafter, the fresh semen was diluted using ringer lactate + chicken yolk (P1) and coconut water + chicken yolk (P2), then stored at 5^{o}C for 0, 6, 12, 24 hour. The data were analyzed using analysis of variance (ANOVA) with 2x4 factorial-completely randomized design. Two sperm type dilution and four storage time were used as experimental factors. It both factors and their interaction significantly affected to the variables. The Duncan multiple range test was performed to evaluate the difference between the level of factors. Result showed significant effect of both diluent and duration of storage (P<0,05) to the motility and viability *spermatozoa* of Ketawa chicken. The average motility of ringer lactate + chicken yolk (P1) and coconut water + chicken yolk (P2) were 63.00 ± 10.16% and 54.25 ± 16.21%, while the viability of P1 and P2 were 66.85 ± 8.56% and 59.95 ± 9.67%. The average motility after storage at 0, 6, 12, 24 hour were 73.00 ± 1.46%, 64.00 ± 4.24%, 55.00 ± 7.77%, 42.00 ±11.31% respectively. The viability after storage at 0, 6, 12, 24 hour were 74.60 ± 3.11%, 66.51 ± 5.23%, 58.06 ± 7.59%, 54.42 ± 3.57% respectively. It can be concluded that the ringer lactate + chicken yolk is better than coconut water + chicken yolk for dilution of *spermatozoa* of Ketawa chicken until the 24 hour stored at 5^{o}C.

Keyword: (Ketawa chicken, *spermatozoa*, ringer lactate, coconut water, chicken yolk, diluent)