

INTISARI

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PENGARUH PENAMBAHAN *DIMETHYL ACETAMIDE* 8, 10 DAN 12 PERSEN PADA BAHAN PENGECER BELTSVILLE POULTRY SEMEN EXTENDER TERHADAP KUALITAS SPERMA AYAM KAMPUNG SETELAH DIBEKUKAN

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan zat krioprotektan *dimethyl acetamide* dengan tingkat konsentrasi yang berbeda saat pembekuan sperma terhadap kualitas sperma ayam. Sperma ditampung dari 4 ekor pejantan ayam kampung yang berumur sekitar 12 sampai 18 bulan dengan metode Burrows dan Quinn. Sperma segar diperiksa kualitasnya lalu dicampur menjadi satu untuk ditambahkan pengencer *Beltsville Poultry Semen Extender* (BPSE) yang kemudian dibagi 3 sama rata dan masing masing ditambahkan krioprotektan berupa *dimethyl acetamide* dengan kadar 8%(P1), 10%(P2) dan 12%(P3). Semen diekuilibrasikan selama 1 jam dalam suhu 4° C lalu dibekukan pada suhu -196° C selama 24 jam. Data yang diperoleh berupa kualitas sperma segar dan kualitas sperma setelah diencerkan yang dianalisis dengan rerata dan standar deviasi, sedangkan data kualitas sperma beku dianalisis dengan analisis variansi menggunakan rancangan acak lengkap pola searah. Hasil penelitian menunjukkan bahwa pengaruh penambahan *dimethyl acetamide* pada bahan pengencer *Beltsville Poultry Semen Extender* terhadap kualitas sel sperma Ayam Kampung tidak berbeda nyata. Rata-rata persentase motilitas masing-masing perlakuan adalah P1 (5,43±0,78%), P2 (5,56±1,09%), dan P3 (5,75±0,65%). Rata-rata persentase viabilitas adalah P1 (8,2±2,2%), P2 (8,94±1,53%), dan P3 (6,94±1,34%). Rata-rata abnormalitas adalah P1 (11,51±3,08%), P2 (11,31±2,68%), dan P3 (11,36±2,69%). Berdasarkan hasil dari penelitian ini dapat disimpulkan bahwa penambahan *dimethyl acetamide* 8%, 10% dan 12% pada bahan pengencer *Beltsville Poultry Semen Extender* menghasilkan kualitas sel sperma yang kurang baik dan tidak memenuhi syarat untuk IB.

Kata kunci : kualitas sperma, Ayam Kampung, *dimethyl acetamide*, pembekuan sperma

ABSTRACT

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THE EFFECT OF ADDING *DIMETHYL ACETAMIDE* 8, 10 AND 12 PERCENT TO BELTSVILLE POULTRY SEMEN EXTENDER ON AYAM KAMPUNG SPERM QUALITY AFTER FREEZING

This study aimed to know the effect of adding *dimethyl acetamide* with different concentration level on Ayam Kampung sperm quality after freezing. Four rooster Ayam Kampung which aged approximately 12-18 months were collected for their sperms with Burrows and Quinn methods. Fresh semen was checked for its quality then diluted with Beltsville Poultry Semen Extender and *dimethyl acetamide* with 8%(P1), 10%(P2) and 12%(P3). Semen was equilibrated for 1 hour on 4° C temperature then frozen for 1 day on -196° C. The data obtained from fresh sperm quality and after diluted were analyzed with mean and standard deviation, whereas the data from semen quality after freezing were analyzed by analysis of variance using completely randomized design. The results showed that the effect of adding *dimethyl acetamide* to Beltsville Poultry Semen Extender on Ayam Kampung sperm was not significantly different. The average percentage of sperm motility from the treatments were P1 (5,43±0,78%), P2 (5,56±1,09%), and P3 (5,75±0,65%). Respectively, the average percentage of viability were P1 (8,2±2,2%), P2 (8,94±1,53%), dan P3 (6,94±1,34%). Respectively, average of abnormality were P1 (11,51±3,08%), P2 (11,31±2,68%) and P3 (11,36±2,69%). The result showed that adding 8%, 10% and 12% *dimethyl acetamide* to Beltsville Poultry Semen Extender did not give significantly affect on the quality of rooster sperm after freezing. Based on the results of this study it can be concluded that adding 8%, 10% and 12% *dimethyl acetamide* to Beltsville Poultry Semen Extender will produce low quality of sperm and not acceptable for artificial insemination

Keywords : sperm quality, ayam kampung, dimethyl acetamide, sperm freezing