

PENGARUH PENAMBAHAN EKSTRAK DAUN SUNGKAI (*Peronema canescens*) PADA PENGENCER TRIS KUNING TELUR TERHADAP KUALITAS SEMEN SAPI BALI

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INTISARI

Penelitian ini untuk mengetahui pengaruh penambahan ekstrak daun sungkai (*Peronema canescens*) pada pengencer tris kuning telur terhadap kualitas semen sapi Bali. Penelitian dilakukan di Balai Besar Inseminasi Buatan Singosari dengan menggunakan semen dari sapi Bali umur 8 tahun. Semen dikoleksi dengan vagina buatan seminggu sekali dan yang berkualitas baik dibagi ke dalam 4 kelompok perlakuan, yaitu P0: tanpa penambahan ekstrak daun sungkai pada pengencer tris kuning telur, P1: penambahan 10% ekstrak daun sungkai, P2: penambahan 15% ekstrak daun sungkai dan P3: penambahan 20% ekstrak daun sungkai. Semen kemudian disimpan selama 48 jam. Variabel yang diamati adalah motilitas, viabilitas, membran plasma utuh (MPU) dan abnormalitas. Data dianalisis menggunakan rancangan acak lengkap pola faktorial 4x2 dan diuji dengan DMRT. Hasil penelitian menunjukkan bahwa penambahan ekstrak daun sungkai dan lama penyimpanan berpengaruh signifikan terhadap motilitas, viabilitas, dan MPU spermatozoa ($P < 0,05$), tetapi tidak berpengaruh pada abnormalitas spermatozoa ($P > 0,05$). Rata-rata nilai untuk masing-masing perlakuan adalah: P0: motilitas $78,87 \pm 1,39\%$, viabilitas $73,98 \pm 3,99\%$, MPU $73,64 \pm 1,24\%$, abnormalitas $10,41 \pm 1,21\%$, P1: motilitas $81,37 \pm 1,79\%$, viabilitas $75,85 \pm 4,24\%$, MPU $75,92 \pm 1,13\%$, abnormalitas $10,20 \pm 0,99\%$, P2: motilitas $85,87 \pm 1,49\%$, viabilitas $80,77 \pm 1,81\%$, MPU $82,45 \pm 3,42\%$, abnormalitas $10,87 \pm 0,98\%$, P3: motilitas $83,37 \pm 1,33\%$, viabilitas $77,45 \pm 2,71\%$, MPU $78,50 \pm 1,01\%$, abnormalitas $11,53 \pm 1,37\%$. Rata-rata nilai motilitas, viabilitas, MPU, dan abnormalitas spermatozoa pada penyimpanan 24 jam adalah: $84,68 \pm 1,25\%$, $79,74 \pm 2,28\%$, MPU $78,75 \pm 1,46\%$, $10,54 \pm 1,26\%$. Sedangkan pada penyimpanan 48 jam adalah $80,06 \pm 1,74\%$, $74,27 \pm 4,10\%$, $76,50 \pm 1,93\%$, $11,23 \pm 1,18\%$. Kesimpulan, penambahan ekstrak daun sungkai dan lama penyimpanan mempengaruhi motilitas, viabilitas, dan MPU, tetapi tidak mempengaruhi abnormalitas spermatozoa. Hasil terbaik diperoleh dengan penambahan ekstrak daun sungkai 15%.

Kata kunci : Semen sapi Bali, Tris kuning telur, Ekstrak daun sungkai, Kualitas semen.

THE EFFECT OF THE ADDITION OF SUNGKAI LEAVES (*Peronema canescens*) EXTRACT TO EGG YOLK TRIS DILUENT ON THE QUALITY OF BALI BULL SEMEN

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ABSTRACT

This research was to find out the effect of adding Sungkai leaf extract (*Peronema canescens*) to Tris egg yolk extender on the quality of Bali cattle semen. The research was conducted at the Singosari Artificial Insemination Center using semen from 8-year-old Bali cattle. Semen was collected using an artificial vagina once a week, and good quality semen was divided into groups P0: without the addition of Sungkai leaf extract to the Tris egg yolk extender, P1: with 10% Sungkai leaf extract, P2: with 15% Sungkai leaf extract, and P3: with 20% Sungkai leaf extract. The semen was then stored for 48 hours. The variables observed were motility, viability, intact plasma membrane (MPU), and abnormalities. Data were analyzed using a completely randomized factorial design (4x2), followed by DMRT. The results showed the addition of Sungkai leaf extract and storage duration significantly affected motility, viability, and MPU of spermatozoa ($P < 0.05$), but did not affect spermatozoa abnormalities ($P > 0.05$). The average values for each treatment were: P0: motility $78.87 \pm 1.39\%$, viability $73.98 \pm 3.99\%$, MPU $73.64 \pm 1.24\%$, abnormalities $10.41 \pm 1.21\%$, P1: motility $81.37 \pm 1.79\%$, viability $75.85 \pm 4.24\%$, MPU $75.92 \pm 1.13\%$, abnormalities $10.20 \pm 0.99\%$, P2: motility $85.87 \pm 1.49\%$, viability $80.77 \pm 1.81\%$, MPU $82.45 \pm 3.42\%$, abnormalities $10.87 \pm 0.98\%$, P3: motility $83.37 \pm 1.33\%$, viability $77.45 \pm 2.71\%$, MPU $78.50 \pm 1.01\%$, abnormalities $11.53 \pm 1.37\%$. The average of motility, viability, MPU, and abnormalities of spermatozoa for 24 hour and 48 storage were $84.68 \pm 1.25\%$, $79.74 \pm 2.28\%$, $78.75 \pm 1.46\%$, $10.54 \pm 1.26\%$, and $80.06 \pm 1.74\%$, $74.27 \pm 4.10\%$, $76.50 \pm 1.93\%$, $11.23 \pm 1.18\%$ respectively. Conclusion, the addition of Sungkai leaf extract and storage duration affected motility, viability, and MPU but did not affect spermatozoa abnormalities. The best results were obtained with the addition of 15% Sungkai leaf extract.

Keywords: Bali cattle semen, Tris egg yolk, Sungkai leaf extract, Semen quality.