

ABSTRACT

EFFECT OF VITAMIN C AND E ADDITION IN EGG YOLK TRIS DILUENT ON FROZEN SEMEN QUALITY OF BRAHMAN CATTLE

By

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This study aims to determine the effect of the addition of vitamin C, vitamin E and their combination on the quality of frozen semen (motility, viability and abnormality) in egg yolk tris diluent in Brahman cattle semen. This research was conducted in January 2023 at BIBD Poncowati, Lampung Province. This study was conducted using Completely Randomized Design (RAL) with 4 treatments and 6 replicates. The treatments were P0; control, P1; addition of vitamin C 0.5 g/100 ml diluent, P2; Vitamin E as much as 0.41 g/100 ml diluent, P3; Combination of Vitamin C as much as 0.5 g/100 ml and Vitamin E as much as 0.41 g/100 ml diluent. The data obtained were analysis of variance at the 5% level and tested further by BNT. The results showed that the addition of vitamin C and vitamin E in egg yolk tris diluent had a real effect on motility, very real on viability but no effect on abnormality. P1 treatment had the highest quality ($P < 0.05$) compared to other treatments, with motility values of $46.16 \pm 1.47\%$, viability of $83.41 \pm 3.06\%$ and abnormality of $8.33 \pm 1.46\%$. The results can be concluded that the addition of vitamin C as much as 0.5 g/100 ml of egg yolk tris diluent showed the highest value in maintaining motility and viability of Brahman cattle semen.

Keywords: Egg yolk tris, Vitamin C, Vitamin E, Spermatozoa, Brahman Cattle

ABSTRAK

PENGARUH PENAMBAHAN VITAMIN C DAN E DALAM PENGECER TRIS KUNING TELUR TERHADAP KUALITAS SEMEN BEKU SAPI BRAHMAN

Oleh

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Penelitian ini bertujuan untuk mengetahui pengaruh penambahan vitamin C, vitamin E dan kombinasinya terhadap kualitas semen beku (motilitas, viabilitas dan abnormalitas) dalam pengencer tris kuning telur pada semen sapi Brahman. Penelitian ini dilaksanakan pada bulan Januari 2023 di BIBD Poncowati, Provinsi Lampung. Penelitian ini dilakukan menggunakan Rancangan Acak Lengkap (RAL) dengan 4 perlakuan dan 6 ulangan. Perlakuannya adalah P0; kontrol, P1; penambahan vitamin C 0,5 g/100 ml pengencer, P2; Vitamin E sebanyak 0,41 g/100 ml pengencer, P3; Kombinasi Vitamin C sebanyak 0,5 g/100 ml dan Vitamin E sebanyak 0,41 g/100 ml pengencer. Data yang diperoleh dianalisis ragam dengan taraf 5% dan diuji lanjut BNT. Hasil penelitian menunjukkan bahwa penambahan vitamin C dan vitamin E pada pengencer tris kuning telur berpengaruh nyata terhadap motilitas, sangat nyata terhadap viabilitas namun tidak berpengaruh terhadap abnormalitas. Pada perlakuan P1 mempunyai kualitas tertinggi ($P < 0,05$) dibandingkan dengan perlakuan lainnya, yaitu dengan nilai motilitas $46,16 \pm 1,47\%$, viabilitas $83,41 \pm 3,06\%$ dan abnormalitas $8,33 \pm 1,46\%$. Hasil penelitian dapat disimpulkan bahwa penambahan vitamin C sebanyak 0,5 g/100 ml pengencer tris kuning telur menunjukkan nilai tertinggi dalam mempertahankan motilitas dan viabilitas semen sapi Brahman.

Kata kunci : Tris kuning telur, Vitamin C, Vitamin E, Spermatozoa, Sapi Brahman