

PENGARUH PERBEDAAN JENIS KUNING TELUR PADA BAHAN PENGECER SITRAT TERHADAP KUALITAS SPERMA KAMBING SAANEN

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INTISARI

Pengencer sperma merupakan salah satu hal yang mempengaruhi keberhasilan inseminasi buatan, contoh pengencer sperma adalah sitrat kuning telur. Penelitian ini menggunakan rancangan dua perlakuan yaitu T1 menggunakan jenis kuning telur yang berbeda (ayam serta itik) dan T2 menggunakan konsentrasi kuning telur yang berbeda (20%, 25% serta 30%), lalu setiap perlakuan dilakukan lima kali pengulangan. Materi yang digunakan merupakan sperma segar berasal dari kambing Saanen. Parameter yang diambil dalam pengujian ini adalah motilitas sperma, viabilitas sperma dan abnormalitas sperma. Data yang diamati kemudian diuji menggunakan rancangan acak lengkap (RAL) faktorial. Apabila berpengaruh nyata akan dilanjutkan uji DMRT. Rerata motilitas pada pengencer kuning telur ayam dan kuning telur itik berturut-turut adalah $67,0 \pm 5,8\%$ dan $73,9 \pm 3,5\%$, kemudian pada konsentrasi 20%, 25% serta 30% berturut-turut adalah $70,4 \pm 6,0\%$, $70,6 \pm 6,0\%$ dan $70,3 \pm 6,2\%$. Rerata viabilitas pada pengencer kuning telur ayam dan kuning telur itik berturut-turut adalah $68,3 \pm 5,0\%$ dan $74,3 \pm 4,2\%$, kemudian pada konsentrasi 20%, 25% serta 30% berturut-turut adalah $71,2 \pm 6,0\%$, $71,3 \pm 5,2\%$ dan $71,4 \pm 5,6\%$. Rerata abnormalitas pada pengencer kuning telur ayam dan kuning telur itik berturut-turut adalah $9,0 \pm 2,1\%$ dan $8,7 \pm 1,5\%$, kemudian pada konsentrasi 20%, 25% serta 30% berturut-turut adalah $8,9 \pm 1,7\%$, $8,7 \pm 1,9\%$ dan $9,1 \pm 1,9\%$. Perbedaan jenis kuning telur berpengaruh nyata terhadap motilitas dan viabilitas sperma ($p < 0,05$), kuning telur itik lebih baik dalam mempertahankannya, tetapi tidak berpengaruh nyata terhadap abnormalitas sperma. Konsentrasi kuning telur tidak berpengaruh nyata terhadap kualitas sperma. Tidak didapatkan interaksi yang nyata antara jenis kuning telur dan konsentrasi kuning telur.

(Kata kunci: sperma kambing Saanen, kuning telur, pengencer sitrat, inseminasi buatan, motilitas)

THE EFFECT OF DIFFERENT TYPES OF EGG YOLKS IN EGG CITRATE DILUTIONERS TO SPERM QUALITY OF SAANEN GOATS

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ABSTRACT

Sperm diluent is one of the factors that affect the success of artificial insemination. An example of a sperm diluent is egg yolk citrate. This study used a two-treatment design, namely T1 using different types of egg yolks (chicken and duck) and T2 using different egg yolk concentrations (20%, 25%, and 30%). Each treatment was repeated five times. The material used was fresh sperm from Saanen goats. The parameters measured in this test were sperm motility, sperm viability, and sperm abnormalities. The data collected were analyzed using a completely randomized factorial design (CRD). If a significant effect is found, the Duncan's Multiple Range Test (DMRT) will be conducted. The average motility in chicken egg yolk diluent and duck egg yolk diluent were $67.0 \pm 5.8\%$ and $73.9 \pm 3.5\%$, respectively. The average motility in egg yolk concentrations of 20%, 25%, and 30% were $70.4 \pm 6.0\%$, $70.6 \pm 6.0\%$, and $70.3 \pm 6.2\%$, respectively. The average viability in chicken egg yolk diluent and duck egg yolk diluent were $68.3 \pm 5.0\%$ and $74.3 \pm 4.2\%$, respectively. The average viability in egg yolk concentrations of 20%, 25%, and 30% were $71.2 \pm 6.0\%$, $71.3 \pm 5.2\%$, and $71.4 \pm 5.6\%$, respectively. The average abnormalities in chicken egg yolk diluent and duck egg yolk diluent were $9.0 \pm 2.1\%$ and $8.7 \pm 1.5\%$, respectively. The average abnormalities in egg yolk concentrations of 20%, 25%, and 30% were $8.9 \pm 1.7\%$, $8.7 \pm 1.9\%$, and $9.1 \pm 1.9\%$, respectively. The difference in egg yolk types affects spermatozoa motility and viability ($P < 0.05$), duck egg yolk is better at preserving it, but it does not significantly affect spermatozoa abnormalities. Egg yolk concentration does not significantly affect sperm quality. There was no significant interaction between egg yolk types and egg yolk concentration.

(Keywords: Saanen goat sperm, egg yolk, citrate diluent, artificial insemination, motility)