

THE LEVELS OF PROGESTERON HORMONE IN BEEF CATTLE SERUM AT THE REGENCIES OF BANTUL AND BOYOLALI

ABSTRACT

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This research aims to determine the difference concentrations of progesteron hormone in cattle at the regencies of Bantul and Boyolali. This research used blood sample from 16 heads of cattle (8 heads from Bantul and 8 heads from Boyolali). A total of 5 ml blood has taken from coccygeal vein, a blood samples were centrifuged at the speed of 2500 rpm for 10 minutes to take the serum. The serum which obtained was tested by using Enzyme Linked Immuno-Sorbent Assay (ELISA) (DRG[®] Progesterone ELISA EIA-1561) to determine the levels of progesterone. The sensitivity of this technique are about 0.045 ng/ml. The coefficient of intra and inter-assay is less than 10 %, cross reaction of the other steroid is less than 2 %. The results of ELISA were analyzed statistically using Independent t-test, it supported by SPSS programs. The results of this research concluded that the average levels of progesteron hormone from blood serum of cattle regency of Bantul (3.59 ± 1.60 ng/ml) was higher than the regency Boyolali (2.77 ± 1.04 ng/ml) and there was no statistically significant difference ($P > 0.05$) between the levels of progesteron hormone in cattle at the regencies of Bantul and Boyolali.

Keywords: progesteron, serum, cattle, pregnant, estrus

**KADAR HORMON PROGESTERON PADA SERUM DARAH SAPI
POTONG BETINA DI KABUPATEN BANTUL
DAN KABUPATEN BOYOLALI**

INTISARI

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Penelitian ini bertujuan untuk mengetahui adanya perbedaan konsentrasi hormon progesteron pada sapi potong betina di kabupaten Bantul dan kabupaten Boyolali. Penelitian ini menggunakan darah yang diperoleh dari 16 ekor sapi potong betina (8 ekor dari kabupaten Bantul dan 8 ekor dari kabupaten Boyolali). Sebanyak 5 ml darah diambil melalui vena *coccygeal*, sampel darah kemudian disentrifus dengan kecepatan 2500 rpm selama 10 menit untuk diambil serum. Serum yang diperoleh, diuji dengan menggunakan *Enzym Linked Immuno-Sorbent Assay* (ELISA) (DRG® Progesterone ELISA EIA-1561) untuk mengetahui kadar progesteron. Sensitivitas teknik ini sebesar 0,045 ng/ml. Koefisien intra dan inter-asai kurang dari 10 %, reaksi silang terhadap steroid lain kurang 2 %. Hasil ELISA kemudian dianalisis secara statistik menggunakan metode *Independent t-test* dengan bantuan program komputasi SPSS. Dari hasil penelitian dapat disimpulkan bahwa rata-rata kadar hormon progesteron dari serum darah sapi potong di kabupaten Bantul ($3,59 \pm 1,60$ ng/ml) lebih tinggi daripada di kabupaten Boyolali ($2,77 \pm 1,04$ ng/ml) dan tidak ada perbedaan yang signifikan ($P > 0,05$) antara kadar hormon progesteron sapi potong di kabupaten Bantul dan kabupaten Boyolali.

Kata kunci : progesteron, serum, sapi potong, bunting, estrus