



INTISARI

HUBUNGAN GEJALA FISIK SAPI PERANAKAN ONGOLE (PO) ESTRUS DENGAN KADAR ESTRADIOL

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Deteksi estrus dapat dilakukan dengan melihat gejala fisik estrus. Apabila kadar estradiol tinggi maka gejala fisik dan perilaku estrus tersebut lebih mudah diamati. Penelitian ini bertujuan untuk mengetahui gejala fisik sapi estrus dan kadar estradiol dalam plasma darah sapi, serta mengetahui hubungan gejala fisik sapi estrus dengan kadar estradiol. Penelitian ini menggunakan lima ekor sapi Peranakan Ongole (PO) di Dusun Kuwang, Kecamatan Cangkringan, Sleman. Dua ekor sapi estrus secara alami, tiga ekor sapi diberi perlakuan penyuntikan prostaglandin $F_{2\alpha}$ ($PGF_{2\alpha}$). Skoring dilakukan terhadap gejala fisik yang muncul dengan skala 1 sampai 3. Sampel darah diambil dan disentrifugasi dengan kecepatan 3000 rpm selama 15 menit untuk mendapatkan plasma darah. Plasma darah diuji menggunakan *Enzyme Linked Immunosorbent Assay* (ELISA) untuk mendapatkan kadar estradiol. Hasil penelitian menunjukkan bahwa gejala fisik estrus berupa gelisah, leleran vagina, mukosa vulva memerah dan basah. Rata-rata kadar hormon estradiol pada plasma darah sapi estrus adalah $47,44 \pm 46,67$ pg/ml. Peningkatan kadar estradiol yang tidak maksimal diduga dapat menyebabkan gejala fisik sapi estrus yang timbul tidak tampak nyata.

Kata kunci: ELISA, estradiol, estrus, gejala estrus, sapi Peranakan Ongole (PO)



ABSTRACT

PHYSICAL SIGNS RELATION OF ESTROUS ONGOLE CROSSBRED CATTLE WITH THE CONCENTRATION OF ESTRADIOL

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Estrous detection can be found by watching the clinical sign of estrous. If the concentration of estradiol was high, the physical signs and the estrous behavior are more easily to observe. This study aims to determine the physical signs of estrous cattle, the estradiol concentration in the blood plasma, and the relation of the physical signs of estrous cattle with estradiol concentration. This study used five Ongole Crossbred cattle from sub district of Kuwang, district of Cangkringan, sub province of Sleman. Two of them were in their natural estrous period, three others were treated with prostaglandin $F_{2\alpha}$ ($PGF_{2\alpha}$) injection to synchronize estrous period. Assasement of the physical signs that appear was done using scoring tabulation by one to three scale. The blood samples were taken and centrifuged at 3000 rpm for 15 minutes to obtain blood plasma. Blood plasma was tested using Enzyme Linked Immunosorbent Assay (ELISA) to obtain the concentration of estradiol. The result of this research shows that the clinical sign of estrous are restless, vaginal mucous, swollen vulva, vulva mucosal becomes hyperemic and moist. The average estradiol concentration in the blood plasma of estrous cattle is $47,44 \pm 46,67$ pg/ml. The rising of estradiol concentration which is not optimal, could be expected to cause the physical signs become not apparent.

Key words: ELISA, estradiol, estrous, estrous signs, Ongole Crossbred cattle