RESPON ESTRUS DAN KADAR HORMON ESTROGEN INDUK KAMBING SAANEN YANG DIBERI FLUSHING PAKAN DALAM PROGRAM INDUKSI BERAHI

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INTISARI

Kambing Saanen memiliki keunggulan dalam produksi susu dan masa laktasi panjang. Pengembangan kambing Saanen di Indonesia belum optimal karena rendahnya kinerja reproduksi. Untuk menanggulangi permasalahan tersebut dapat dilakukan suplementasi pakan tinggi protein menggunakan metode *flushing.* Penelitian dilakukan untuk mengetahui kadar respon estrus dan kadar hormon estrogen kambing Saanen yang diberi *flushing* pakan dalam program sinkronisasi berahi dengan menggunakan implan *controlled internal drug release* (CIDR). Penelitian ini menggunakan 8 ekor induk kambing Saanen dengan BCS kisaran 3 yang dibagi menjadi 2 perlakuan pakan secara berturut-turut yaitu penambahan s*oy bean* meal (SBM) 0% dan 5%. Pemeliharaan induk dalam kandang individu, pakan diberikan pada pagi dan sore hari, air minum secara *ad-libitum*. Induk kambing Saanen disinkronisasi dengan CIDR yang dipasang secara intravaginal selama 12 hari. Pada hari ke-10 dilakukan injeksi PGF2α secara *intramuscular*. Variabel yang diamati adalah respon estrus pada ternak yang meliputi visual vulva, lendir yang keluar dari vagina, nilai pH vagina, lama estrus, onset, sitologi sel vagina, serta kadar hormon estrogen. Data dianalisis menggunakan *Independent sample T-test.* Hasil penelitian menunjukkan kelompok perlakuan memberikan respon visual estrus, temperatur vagina dan onset estrus yang lebih nyata daripada kelompok kontrol ($p<0,05$). Lebih lanjut, level hormon estrogen pada kelompok perlakuan lebih tinggi daripada kelompok kontrol ($p<0,05$). Hasil respon estrus pada ternak kontrol dan suplementasi yaitu warna vulva 2,00±0,00 dan 2,75±0,50; bengkak vulva 2,00±0,00 dan 2,75 ± 0,50; sekresi mukus 2,75±0,50 dan 2,75±0,50. Temperatur vagina dan onset estrus pada kelompok kontrol adalah 38,55 ± 0,17^{o}C dan 7,13 ± 0,03 jam; sedangkan pada kelompok perlakuan adalah 39,13 ± 0,39^{o}C dan 10,0 ± 1,81 jam. Level estrogen pada kelompok perlakuan dan kelompok kontrol yaitu 94,42±2,91 pg/ml dan 119,27±7,10 pg/ml. Dapat disimpulkan bahwa *flushing* pakan berpengaruh terhadap respon estrus dan kadar hormon estrogen kambing Saanen yang diinduksi berahi dengan implan CIDR dan PGF2α.

(Kata Kunci: *Controlled internal drug release*, *Flushing* pakan, Estrogen, Kambing Saanen, Respon Estrus)

ESTROUS RESPONSE AND ESTROGEN LEVELS OF SAANEN DOES GIVEN FEED FLUSHING IN ESTROUS INDUCTION PROGRAMME

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ABSTRACT

Saanen goats have advantages in milk production and long lactation period. The development of Saanen goats in Indonesia has not been optimal due to low reproductive performance. To overcome these problems, high protein feed supplementation can be done using the flushing method. This study was conducted to determine the estrous response and estrogen levels of Saanen does given flushing feed in the estrous induction program using controlled internal drug release (CIDR) implants. This study used 8 Saanen does with BCS range 3. Does were divided into 2 consecutive feed treatments, namely the addition of soy bean meal (SBM) 0% (control) and 5% (treatment). The does were kept in individual cages, feed was given in the morning and evening, while drinking water was ad-libitum. Saanen does were synchronised with intravaginal CIDR for 12 days. On the 10th day, PGF2α was injected intramuscularly. The variables observed were the estrous response which included visual vulva, vaginal pH, estrous duration, onset, vaginal cell cytology, and estrogen hormone levels. Data were analysed using the Independent sample T-test. The results showed that the treatment group gave a more significant visual response of estrous, vaginal temperature and onset of estrous than the control group ($p<0.05$). Furthermore, the level of estrogen hormone in the treatment group was higher than the control group ($p<0.05$). The results of estrous response in control and treatment does were vulval colour 2.00±0.00 and 2.75±0.50; vulval swelling 2.00±0.00 and 2.75±0.50; mucous secretion 2.75±0.50 and 2.75±0.50. Vaginal temperature and onset of estrous in the control group were 38.55 ± 0.17°C and 7.13 ± 0.03 hours; while in the treatment group were 39.13 ± 0.39°C and 10.0 ± 1.81 hours. Estrogen level in the control and treatment group were 94.42±2.91 pg/ml and 119.27±7.10 pg/ml respectively. It can be concluded that feed flushing affects the estrous response and estrogen levels of Saanen goats during the estrous induction program.

(Keywords: Controlled internal drug release, Feed flushing, Estrogen, Saanen goat, Estrous response)