

ABSTRAK

KORELASI RASIO HORMON TRIIODOTIRONIN (T3) DAN TIROKSIN (T4) TERHADAP TESTOSTERON PADA SAPI JANTAN YANG DIBERIKAN TEPUNG CANGKANG KERANG DARAH

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Tepung cangkang kerang darah adalah suplemen pakan dengan kandungan mineral seperti seng yang diketahui berperan dalam metabolisme rasio hormon T3/T4 dan testosteron. Penelitian ini bertujuan untuk mengetahui korelasi rasio T3/T4 dengan testosteron pada sapi jantan yang diberikan tepung cangkang kerang. Objek penelitian ini adalah 7 ekor sapi jantan berumur 3 sampai dengan 4 tahun yang dipelihara secara intensif. Sapi-sapi tersebut kemudian diberi suplemen berupa tepung cangkang kerang darah sebanyak 90 gram/ekor/hari yang dicampurkan dalam konsentrat. Pengambilan sampel darah dilakukan pada minggu pertama dan minggu keenam yang kemudian dilakukan pengecekan kadar hormon T3, T4, dan testosteron menggunakan metode ELISA dengan kit Calbiotech®. Hasil rata-rata rasio T3/T4 dari ketujuh sapi pada minggu pertama dan keenam masing-masing $0,16 \pm 0,08$ dan $0,16 \pm 0,05$. Sementara itu, rerata kadar testosteron minggu pertama dan minggu keenam adalah $5,76 \pm 3,66$ ng/ml dan $6,14 \pm 3,81$ ng/ml. Hasil analisis statistik menunjukkan korelasi negatif antara rasio T3/T4 dan kadar testosteron meskipun tidak signifikan. Berdasarkan hasil penelitian dapat disimpulkan bahwa terdapat korelasi negatif antara rasio T3/T4 dengan testosteron pada sapi jantan yang diberi tepung cangkang kerang darah.

Kata kunci : tepung cangkang kerang darah, rasio T3/T4, testosteron, seng

ABSTRACT

CORRELATION OF TRIODOTHYRONINE (T3) AND THYROXINE (T4) HORMONE RATIO WITH TESTOSTERON IN BULLS SUPPLEMENTED WITH BLOOD CLAMSHELL POWDER

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Blood clamshell powder is a feed supplement containing minerals such as zinc, which is known to play a role in the metabolism of the T3/T4 hormone ratio and testosterone. This study aimed to determine the correlation between the T3/T4 ratio and testosterone levels in bulls supplemented with blood clamshell powder. The study was conducted on seven bulls aged 3 to 4 years, which were intensively reared. These bulls were given a supplement of blood clamshell powder at a dose of 90 grams/head/day, mixed into the concentrate feed. Blood samples were collected in the first and sixth weeks, followed by the measurement of T3, T4, and testosterone levels using the ELISA method with Calbiotech® kits. The average T3/T4 ratio in the seven bulls was 0.16 ± 0.08 in the first week and 0.16 ± 0.05 in the sixth week. Meanwhile, the mean testosterone levels were 5.76 ± 3.66 ng/ml in the first week and 6.14 ± 3.81 ng/ml in the sixth week. Statistical analysis showed a negative correlation between the T3/T4 ratio and testosterone levels, although the correlation was not statistically significant. Based on the findings, it can be concluded that there is a negative correlation between the T3/T4 ratio and testosterone levels in male cattle supplemented with blood clamshell powder.

Keywords: blood clamshell powder, T3/T4 ratio, testosterone, zinc