ABSTRAK

PENDUGAAN BOBOT TUBUH SAPI SIMPO DENGAN PERSAMAAN WINTER INDONESIA DAN *LAMBOURNE* DI KECAMATAN TERBANGGI BESAR

Oleh

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Penelitian ini bertujuan untuk menduga bobot tubuh sapi SimPO melalui ukuran tubuh berupa panjang badan dan lingkar dada menggunakan rumus Winter Indonesia dan rumus *Lambourne*. Penelitian dilaksanakan pada bulan November 2025 di Kecamatan Terbanggi Besar Kabupaten Lampung Tengah dengan metode survei dan menggunakan teknik *purposive sampling.* Sampel penelitian terdiri dari 120 sapi SimPO jantan dan betina berumur 2–3 tahun, tidak agresif, dan betina tidak bunting. Variabel yang diamati meliputi panjang badan (PB), lingkar dada (LD), dan bobot tubuh (BT) aktual. Kesesuaian bobot dugaan dievaluasi menggunakan koefisien determinasi (R^2), persentase penyimpangan, dan keterandalan rumus, sedangkan hubungan antar variabel dianalisis melalui scatter plot dengan program R.Hasil penelitian menunjukkan bahwa LD dan PB sangat berkorelasi dengan BT dengan nilai koefisien korelasi masing-masing 0,944 dan 0,817. Hasil penelitian juga menunjukkan bahwa pendugaan bobot tubuh dengan rumus Winter Indonesia dan *Lambourne* memiliki ketelitian sangat baik R^2 = 0,942. Hasil penelitian juga menunjukkan bahwa penyimpangan bobot dugaan kedua rumus ini dari bobot aktual relatif kecil, yaitu 7,87% pada rumus Winter Indonesia dan 8,08% rumus *Lambourne*. Selain itu, kedua rumus tersebut juga memiliki nilai keterandalan yang tinggi, masing-masing sebesar 91,91% dan 92,12%. Berdasarkan hasil penelitian ini dapat disarankan bahwa rumus Winter Indonesia lebih direkomendasikan untuk digunakan dalam pendugaan bobot tubuh sapi SimPO karena memiliki tingkat ketelitian yang sedikit lebih tinggi dibandingkan dengan rumus *Lambourne* serta lebih praktis diterapkan tanpa memerlukan alat timbang.

Kata kunci: Sapi SimPO, Lingkar dada, Panjang badan, Bobot tubuh, Rumus Winter Indonesia, Rumus *Lambourne*

ABSTRACT

Estimation of SimPO Cattle Body Weight Using the Winter Indonesia and *Lambourne* Equations in Terbanggi Besar District

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This study aims to estimate the body weight of SimPO cattle through body measurements in the form of body length and chest circumference using the Winter Indonesia formula and the *Lambourne* formula. This study was conducted in November 2025 in Terbanggi Besar District, Central Lampung Regency using a survey method and purposive sampling technique. The study sample consisted of 120 male and female SimPO cattle aged 2–3 years, non-aggressive, and non-pregnant females. The variables observed included body length (PB), chest circumference (LD), and actual body weight (BT). The suitability of body weight estimates was evaluated using the coefficient of determination (R^2), percentage deviation, and reliability of the formula, while the relationship between variables was analyzed through a scatter plot with the R program. The results showed that LD and PB were highly correlated with BT with correlation coefficient values of 0,944 and 0,817, respectively. The results also showed that body weight estimates using the Winter Indonesia and *Lambourne* formulas had very good accuracy R^2 = 0,942. The results also showed that the deviation of the estimated body weight of the two formulas from the actual body weight was relatively small, namely 7,87% for the Winter Indonesia formula and 8,08% for the *Lambourne* formula. Furthermore, both formulas also had high reliability values, respectively at 91,91% and 92,12%. Based on these results, it can be suggested that the Winter Indonesia formula is more recommended for use in estimating the body weight of SimPO cattle because it has a slightly higher level of accuracy compared to the *Lambourne* formula and is more practical to apply without the need for weighing equipment.

Keywords: SimPO cattle, chest girth, body length, body weight, Winter Indonesia formula, *Lambourne* formula.