PREDIKSI BOBOT BADAN KUDA PACU DAN *SANDALWOOD* MENGGUNAKAN LIMA FORMULA YANG BERBEDA

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INTISARI

Bobot badan merupakan komponen utama untuk menentukan volume pemberian obat dan pemberian pakan pada kuda. Karena keterbatasan alat berupa timbangan bobot badan, penggiat kuda menggunakan lima formula dari hasil penelitian Marcenac dan Aublet (WF1), Jones (WF2), Sendel (WF3), Owen (WF4), dan Martinson (WF5) untuk memprediksi bobot badan kuda berdasarkan ukuran dimensi tubuhnya. Formula-formula tersebut belum pernah diaplikasikan pada kuda di Indonesia yang digunakan untuk menarik andong yang mereka sebut sebagai "Kuda Pacu" dan *Sandalwood*. Penelitian ini bertujuan untuk mengetahui formula yang tepat dalam memprediksi bobot badan "Kuda Pacu" dan *Sandalwood* berdasarkan perbedaan simpangan antara bobot badan aktual kuda (WA) dengan bobot badan yang dihitung menggunakan lima formula. Penelitian dilakukan menggunakan 51 ekor kuda dari Kelompok Andong Wisata Turanggajaya-Borobudur dan Kelompok Andong Wisata Kota Gede-Bantul. Penelitian dilakukan dengan mengukur dimensi tubuh; Tinggi Badan (H); Lingkar Dada (G); Lingkar Perut (G2); Lingkar Leher (N); dan Panjang Tubuh (L dan L2) menggunakan pita ukur dan mistar, serta menimbang WA menggunakan timbangan digital berkapasitas 2 ton. Normalitas data (H, G, G2, N, L, dan L2) diuji menggunakan Kolmogorov-Smirnov sebelum dimasukkan ke dalam formula WF1 sampai WF5. Hasil pengukuran WA, WF1 sampai WF5 dianalisis menggunakan uji statistik non-parametrik Kruskal-Wallis dan uji lanjutan Mann-Whitney. Hasil uji normalitas menunjukkan bahwa data tidak terdistribusi normal ($P<0.05$). Hasil uji statistik non-parametrik Kruskal-Wallis menunjukkan adanya perbedaaan nyata antara WA, WF1, WF2, WF3, WF4 dan WF5 ($P≥0.05$). Hasil uji lanjutan Mann-Whitney menunjukkan tidak adanya perbedaan nyata antara bobot badan aktual WA, WF1 dan WF2. Disimpulkan bahwa formula Jones (WF2) dan Sendel (WF3) merupakan formula paling efektif untuk mengestimasi bobot Kuda Pacu dan *Sandalwood.*

Kata kunci: Kuda Pacu, Dimensi tubuh, Prediksi bobot badan, *Sandalwood*.

ESTIMATION OF BODYWEIGHT ON INDONESIAN LOCAL HORSE AND SANDALWOOD USING FIVE DIFFERENT FORMULAS

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ABSTRACT

Bodyweight is the main component to determine volume of drugs and feeding program on equestrian terms. Due to limitation of bodyweight scale, equestrian people use several formulas to predict bodyweight based on morphometric dimensions such as Marcenac and Aublet (WF1), Jonese's (WF2), Sendel's (WF3), Owen's (WF4), and Martinson's (WF5). Those formulas have never been applied on Indonesia local horse and Sandalwood which are used to track the cart (Andong). The objective of this study was to determine the best formula to predict bodyweight on Indonesia local horse and Sandalwood using five formulas WF1 to WF5 mentioned before. This study was conducted on 51 horses from two Tourist Cart Clubs named "*Turanggajaya*" located in Borobudur and "*Kotagede*" in Bantul. The study was conducted by measuring some body dimensions such as: body height (H) and body lengths (L1 and L2) using stick meter and cest girth (G1); umbilical girth (G2); and neck circumference (N) using tape measure. Actual bodyweight was also measured by 2 ton of capacity digital scale. Those data normality of H, G1, G2, N, L1, and L2 were tested by Kolmogorov-Smirnov test before calculated by five difference formulas mentioned before. Non-parametric stastitical method Kruskal-Wallis and Mann-Whitney was applied to determine the difference of WA, WF1-WF5. As the result, data was not normally distributed (P<0.05) and there was significanct difference on WA, WF1, WF2, WF3, WF4 and WF5 (P≥0.05) based on Kruskal-Wallis test. Mann-Whitney test showed that there is no significant difference between WA, WF2 and WF3. It is concluded, that the most effective formulas to predict bodyweight of Indonesian local horse and Sandalwood are WF2 and WF3.

Keywords: Body dimension, Estimated bodyweight, Indonesia Local Horse, Sandalwood.