



PENDUGAAN BOBOT BADAN MELALUI UKURAN TUBUH PADA DOMBA JANTAN PERSILANGAN DORPER DAN GARUT

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INTISARI

Penelitian ini bertujuan untuk menentukan rumus pendugaan bobot badan menggunakan ukuran tubuh pada domba persilangan Dorper dan Garut. Materi yang digunakan yaitu domba jantan persilangan Dorper dan Garut sebanyak 41 ekor dengan umur 6-12 bulan. Variabel yang diamati meliputi ukuran lingkar dada, panjang badan, tinggi gumba, dan bobot badan. Data hasil penelitian dianalisis menggunakan analisis korelasi *Pearson 2-tailed*, regresi linear metode *backward*, dan kurva estimasi. Hasil analisis korelasi menunjukkan hubungan positif antara variabel lingkar dada, panjang badan, dan tinggi gumba terhadap bobot badan dengan koefisien korelasi masing-masing sebesar 0,949, 0,921, dan 0,741. Hasil analisis regresi linear berganda didapatkan persamaan $BB = -111,630 + 0,704 (PB) + 0,194 (TG) + 1,201 (LD)$ dengan koefisien determinasi 0,924 dan persentase kesalahan 8,79%. Hasil analisis kurva estimasi lingkar dada menunjukkan hasil terbaik pada model cubic dengan koefisien determinasi 0,922 dan persentase kesalahan 8,63%. Dapat disimpulkan bahwa persamaan regresi linier tiga variabel dapat digunakan untuk pendugaan bobot badan dengan hasil yang paling akurat.

Kata kunci : Korelasi, regresi, kurva estimasi, ukuran tubuh, domba garut, domba dorper.



ESTIMATION OF BODY WEIGHT BASED ON BODY MEASUREMENT OF DORPER AND GARUT CROSSBRED RAMS

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ABSTRACT

This study aimed to determine the formula for estimating body weight using body size in Dorper and Garut crossbred rams. The material used was 41 Dorper and Garut crossbred rams aged 6-12 months. The observed variables included heart girth (HG), body length (BL), withers height (WH), and body weight (BW). The data were analyzed using 2-tailed Pearson correlation, backward linear regression, and curve estimation. The results of correlation analysis showed a positive correlation coefficient between the variables of heart girth, body length, and wither height to body weight with a correlation coefficient of 0.949, 0.921, and 0.741, respectively. The results of multiple linear regression analysis obtained the equation $BB = -111.630 + 0.704BL + 0.194WH + 1.201HG$ with a coefficient of determination of 0.924 and a percentage error of 8.79%. The results of the body weight estimation curve analysis using heart girth variable showed the best results in the cubic model with a coefficient of determination of 0.922 and a percentage error of 8.63%. It can be concluded that the three-variable linear regression equation can be used for body weight estimation with the most accurate results.

Keywords: Correlation, regression, estimation curve, body measurement, Garut sheep, Dorper sheep