

PENDUGAAN BOBOT BADAN MELALUI UKURAN TUBUH PADA DOMBA SAKUB JANTAN DI KECAMATAN SIRAMPOG DAN PAGUYANGAN, KABUPATEN BREBES

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INTISARI

Penelitian ini bertujuan untuk menentukan persamaan kurva estimasi dan regresi linier pendugaan bobot badan menggunakan ukuran tubuh pada Domba Sakub jantan. Materi yang digunakan yaitu Domba Sakub jantan sebanyak 176 ekor dengan umur lebih dari 3 bulan, skor kondisi tubuh (SKT) sedang, dan sehat secara fisik, di Kecamatan Paguyangan dan Sirampog, Kabupaten Brebes. Variabel yang diamati yaitu ukuran lingkaran dada, panjang badan, tinggi gumba, dan bobot badan. Data hasil penelitian dianalisis dengan analisis korelasi *Pearson 2-tailed*, kurva estimasi, regresi linier metode *Enter*, dan perhitungan persentase kesalahan. Hasil analisis korelasi menunjukkan hubungan positif antara variabel lingkaran dada, panjang badan, dan tinggi gumba terhadap bobot badan dengan koefisien korelasi masing-masing sebesar 0,796, 0,843, dan 0,840. Hasil analisis kurva estimasi menunjukkan bahwa lingkaran dada mengikuti model persamaan kurva S dengan koefisien determinasi dan persentase kesalahan masing-masing sebesar 0,694 dan 18,02%, panjang badan mengikuti model persamaan kurva S dengan koefisien determinasi dan persentase kesalahan masing-masing sebesar 0,743 dan 16,39%, dan tinggi gumba mengikuti model persamaan kurva *compound* dengan koefisien determinasi dan persentase kesalahan masing-masing sebesar 0,727 dan 16,47%. Hasil analisis regresi linier berganda didapatkan persamaan $BB = -102,002 + 0,301(LD) + 0,797(PB) + 0,935(TG)$ dengan koefisien determinasi dan persentase kesalahan masing-masing sebesar 0,813 dan 13,97%. Dapat disimpulkan bahwa persamaan regresi berganda 3 variabel dapat digunakan untuk mendapatkan hasil pendugaan bobot badan paling akurat.

Kata kunci: prediksi bobot badan, korelasi, kurva estimasi, regresi, Domba Sakub.

ESTIMATION OF BODY WEIGHT BASED ON BODY MEASUREMENTS OF MALE SAKUB SHEEP IN THE SIRAMPOG AND PAGUYANGAN DISTRICTS, BREBES REGENCY

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ABSTRACT

This study aims to determine the estimation curve equations and linear regression models for predicting body weight using body measurements in male Sakub sheep. The study involved 176 male Sakub sheep, aged over three months, with a moderate body condition score (BCS) and physical health, from Paguyangan and Sirampog districts in Brebes Regency. The observed variables were chest girth, body length, withers height, and body weight. The data were analyzed using Pearson's 2-tailed correlation analysis, estimation curves, linear regression with the Enter method, and error percentage calculations. The correlation analysis results indicated positive relationships between chest girth, body length, withers height, and body weight, with correlation coefficients of 0.796, 0.843, and 0.840, respectively. The estimation curve analysis showed that chest girth followed an S-curve model with a coefficient of determination of 0.694 and an error percentage of 18.02%. Body length also followed an S-curve model with a coefficient of determination of 0.743 and an error percentage of 16.39%. Withers height followed a compound curve model with a coefficient of determination of 0.727 and an error percentage of 16.47%. The multiple linear regression analysis yielded the equation $BW = -102.002 + 0.301(CG) + 0.797(BL) + 0.935(WH)$, with a coefficient of determination of 0.813 and an error percentage of 13.97%. It can be concluded that the multiple regression equation with three variables provides the most accurate estimation of body weight.

Keywords: body weight prediction, correlation, estimation curve, regression, Sakub sheep.