

ABSTRAK

PENDUGAAN BOBOT TUBUH SAPI LIMPO MENGGUNAKAN REGRESI LINEAR BERDASARKAN UKURAN TUBUH DAN VOLUME TUBUH DI KELOMPOK TERNAK RUDAM BERJASA DESA BUMIJAYA KECAMATAN CANDIPURO KABUPATEN LAMPUNG SELATAN

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Penelitian ini bertujuan untuk mengetahui korelasi dan regresi antara ukuran-ukuran tubuh dan volume tubuh terhadap bobot tubuh yang dihitung dari ukuran panjang badan dan lingkaran dada sapi Limpo. Penelitian ini dilaksanakan di Kelompok Ternak Rudam Berjasa, Desa Bumijaya, Kecamatan Candipuro, Kabupaten Lampung Selatan. Metode yang digunakan pada penelitian ini adalah survey. Teknik pengambilan sampel dilakukan dengan cara *purposive sampling* dengan cara mengukur dan menimbang tubuh sapi Limpo dengan kriteria umur sapi 2,5--4,5 tahun, sapi betina yang tidak bunting atau bunting kurang dari 2 bulan, BCS 2--4, dan dapat dikendalikan. Data yang diperoleh kemudian ditabulasi menggunakan program excel kemudian data panjang badan, lingkaran dada, dan volume tubuh dianalisis korelasi dan regresinya dengan bobot tubuh sapi Limpo. Analisis korelasi dan regresi antara variabel independen dan variabel dependen menggunakan program R. Hasil penelitian menunjukkan bahwa panjang badan, lingkaran dada, dan volume tubuh memiliki korelasi yang tinggi terhadap bobot tubuh. Nilai korelasi antara panjang badan, lingkaran dada, dan volume tubuh terhadap bobot tubuh masing-masing yaitu 0,92, 0,79, dan 0,90. Sedangkan persamaan regresi antara panjang badan (PB), lingkaran dada (LD) dan volume tubuh (VT) terhadap bobot tubuh (BT) masing-masing yaitu $BT = -515,0988 + 6,7171PB$, $BT = -35,459 + 2,339LD$, dan $BT = 156,7 + 0,0006569VT$, dengan nilai koefisien determinasi masing-masing adalah 0,85, 0,63, dan 0,81.

Kata kunci: Sapi Limpo, Lingkaran dada, Panjang badan, Bobot tubuh, Volume tubuh

ABSTRACT

ESTIMATION OF BODY WEIGHT OF LIMPO CATTLE USING LINEAR REGRESSION BASED ON BODY MEASUREMENTS AND BODY VOLUME IN THE RUDAM BERJASA LIVESTOCK GROUP, BUMIJAYA VILLAGE, CANDIPURO DISTRICT, SOUTH LAMPUNG DISTRICT

By

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This study aims to determine the correlation and regression between body measurements and body volume calculated from body length and chest circumference on body weight of Limpo cattle. This research was carried out in the Rudam Berjasa Livestock Group, Bumijaya Village, Candipuro District, South Lampung Regency. The method used in this research was a survey. The sampling technique was carried out using purposive sampling by measuring and weighing the bodies of Limpo cattle according to the criteria: cattle aged 2.5--4.5 years, not pregnant or less than 2 months pregnant, BCS 2--4, and can be controlled. The data obtained was then tabulated using the Excel program, then data on body length, chest circumference and body volume were analyzed for correlation and regression with the body weight of Limpo cattle. Correlation and regression analysis between the independent variable and the dependent variable used the R program. The results showed that body length, chest circumference and body volume had a high correlation with body weight. The correlation values between body length, chest circumference, and body volume on body weight are 0.92, 0.79, and 0.90 respectively. Meanwhile, the regression equation between body length (BL), chest circumference (CC) and body volume (BV) on body weights were $BW = -515.0988 + 6.7171BL$, $BW = -35.459 + 2.339CC$, and $BW = 156.7 + 0.0006569BV$, with coefficient of determination values respectively 0.85, 0.63, and 0.81.

Keywords: Limpo cattle, chest circumference, body length, body weight, body volume