

ABSTRAK

PENDUGAAN BOBOT TUBUH KAMBING JAWARANDU BETINA MENGUNAKAN PENGUKURAN VOLUME TUBUH DENGAN METODE PERSAMAAN LINIER DI DESA PAJAR MATARAM, KECAMATAN SEPUTIH MATARAM, KABUPATEN LAMPUNG TENGAH

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Penelitian ini bertujuan untuk mengetahui korelasi dan regresi antara ukuran tubuh dan volume tubuh yang dihitung dari ukuran panjang badan dan lingkar dada terhadap bobot tubuh kambing Jawarandu di Desa Pajar Mataram, Kecamatan Seputih Mataram, Kabupaten Lampung Tengah. Metode penelitian yang diterapkan adalah survey. Teknik pengambilan sampel dilakukan dengan menggunakan *purposive sampling*, dengan kriteria kambing berumur 1 hingga 3 tahun, kambing betina yang tidak bunting, dan kambing betina yang tidak menyusui. Data yang diperoleh ditabulasi menggunakan program excel. Analisis korelasi dan regresi antara ukuran-ukuran dan volume tubuh (VT) terhadap bobot tubuh (BT) dilakukan menggunakan program R. Berdasarkan hasil penelitian yang telah dilakukan bahwa nilai koefisien korelasi (r) yang didapat antara lingkar dada, panjang badan, dan volume tubuh terhadap bobot tubuh yaitu berturut-turut 0,927; 0,819, dan 0,920. Bobot tubuh kambing Jawarandu betina dapat diduga menggunakan ukuran tubuh dan volume tubuh dengan persamaan regresi antara lingkar dada, panjang tubuh, dan volume tubuh terhadap bobot tubuh berturut-turut yaitu $BT = -39,19269 + 0,98667 LD$; $BT = -39,2174 + 1,0936 PB$; $BT = 4,075 + 1,043VT$, dengan koefisien determinasi (R^2) berturut-turut 0,859; 0,671, dan 0,848 dengan keterandalan terbaik dimiliki oleh panjang badan yaitu sebesar 99,99%.

Kata kunci: Bobot badan, kambing Jawarandu betina, korelasi, regresi linier volume tubuh

ABSTRACT

ESTIMATION OF BODY WEIGHT OF FEMALE JAWARANDU GOATS USING BODY VOLUME MEASUREMENT USING THE LINEAR EQUATION METHOD IN PAJAR MATARAM VILLAGE, SEPUTIH MATARAM DISTRICT, CENTRAL LAMPUNG REGENCY.

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This study aims to determine the correlation and regression between body measurements and body volume calculated from the body length and chest circumference on body weight of Jawarandu goats in Pajar Mataram Village, Seputih Mataram District, Central Lampung Regency. The research method applied was a survey. The sampling technique was carried out using purposive sampling, with the criteria of goats aged 1 to 3 years, female goats which were not pregnant, and female goats which were not breastfeeding. The data obtained was tabulated using excel. Correlation and regression analysis between body measurements and body volume (VT) on body weight (BT) were carried out using the R program. Based on the results of the research that has been carried out, the correlation coefficient (r) values obtained between chest circumference, body length, and body volume on body weight were 0,927; 0,819, and 0,920, respectively. The body weight of a female Jawarandu goat can also be estimated using body measurements and body volume on body weight with regression equations between chest circumference, body length, and body volume, namely $BT = -39,19269 + 0,98667 LD$, $BT = -39,2174 + 1,0936 PB$, $BT = 4,075 + 1,043 VT$, respectively with the determination coefficient (R^2) of 0,859; 0,671 and 0,848 respectively with the best reliability is achieved by the body length, which is 99,99%.

Keywords: Body weight, female Jawarandu goat, correlation, linear regression of body volume