

ABSTRAK

PENDUGAAN BOBOT BADAN KAMBING JAWARANDU JANTAN MELALUI UKURAN-UKURAN TUBUH DENGAN MENGGUNAKAN PERSAMAAN LINIER DAN NON LINIER DI KECAMATAN TERBANGGI BESAR

Oleh

Dzikri Afridho

Penelitian ini bertujuan untuk menduga bobot tubuh kambing Jawarandu menggunakan ukuran-ukuran tubuh yang dihitung dari tinggi badan, panjang badan, dan lingkar dada. Penelitian ini dilaksanakan di peternakan rakyat Kecamatan Terbanggi Besar. Metode yang digunakan pada penelitian ini adalah survey. Teknik pengambilan sampel dilakukan dengan cara *purposive sampling* dengan cara mengukur dan menimbang tubuh kambing Jawarandu dengan kriteria kambing Jawarandu jantan berumur 1-3 tahun dan tidak agresif. Data yang diperoleh kemudian dianalisis korelasi dan regresinya dengan bobot tubuh kambing Jawarandu. Analisis korelasi dan regresi antara variabel independen dan variabel dependen menggunakan program R. Hasil penelitian menunjukkan bahwa nilai korelasi antara tinggi badan, panjang badan, dan lingkar dada terhadap bobot tubuh masing-masing yaitu 0,68, 0,90, dan 0,67. Sedangkan persamaan regresi linier antara tinggi badan, panjang badan, dan lingkar dada terhadap bobot tubuh masing-masing yaitu $BB = -13,12713 + 0,63879TB$; $BB = -17,93277 + 0,76942PB$; dan $BB = -31,27999 + 0,86286LD$. Persamaan regresi non linier antara tinggi badan, panjang badan, dan lingkar dada terhadap bobot tubuh masing-masing $BB = 25,940201 - 0,646192TB + 0,010488TB^2$; $BB = -16,274036 + 0,710686PB + 0,000517PB^2$; dan $BB = 30,304866 - 1,044359LD + 0,014683LD^2$. Koefisien determinasi masing-masing adalah 0,47; 0,45; dan 0,82. Kesimpulan penelitian ini adalah bahwa ukuran-ukuran tubuh dapat digunakan untuk menduga bobot tubuh kambing Jawarandu.

Kata kunci: Kambing Jawarandu, Panjang Badan, Lingkar Dada, Tinggi Badan, Bobot Tubuh.

ABSTRACT

ESTIMATION OF BODY WEIGHT OF MALE JAWARANDU GOATS THROUGH BODY MEASUREMENTS USING LINEAR AND NON-LINEAR EQUATIONS IN TERBANGGI BESAR DISTRICT

By

Dzikri Afridho

This study aims to estimate the body weight of Jawarandu goats using body measurements calculated from shoulder height, body length and chest circumference. This research was carried out in people's farms in Terbanggi Besar District. The method used in this research was a survey. The sampling technique was carried out using purposive sampling by measuring and weighing the body measurements of Jawarandu goats with the criteria of male Jawarandu goats being 1-3 years old and not aggressive. The data obtained was then analyzed for correlation and regression with the body weight of Jawarandu goats. Correlation and regression analysis between the independent variable and the dependent variable was using the R program. The results of the research showed that the correlation values between height, body length and chest circumference on body weight are 0.68, 0.90 and 0.67, respectively. Meanwhile, the linear regression equation between shoulder height, body length and chest circumference on body weight are $BB = -13.12713 + 0.63879TB$; $BB = -17.93277 + 0.76942PB$; and $BB = -31.27999 + 0.86286LD$, respectively. Non-linear regression equation between shoulder height, body length and chest circumference on body weight are $BB = 25.940201 - 0.646192TB + 0.010488TB^2$; $BB = -16.274036 + 0.710686PB + 0.000517PB^2$; and $BB = 30.304866 - 1.044359LD + 0.014683LD^2$. Respectively with determination coefficient of 0.47; 0.45; and 0.82, respectively. The conclusion of this research is that body measurements can be used to estimate the body weight of Jawarandu goats.

Keywords: Jawarandu Goat, Body Length, Chest Circumference, Body Height, Body Weight.