

**EFEK RANDOM KABUPATEN DAN KECAMATAN TERHADAP
VARIABILITAS BOBOT BADAN DAN UKURAN TUBUH
SAPI PERANAKAN ONGOLE JANTAN**

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INTISARI

Penelitian ini bertujuan untuk mengetahui seberapa besar efek random lokasi kabupaten dan kecamatan terhadap variabilitas bobot badan dan ukuran tubuh sapi berupa panjang badan, lingkar dada, tinggi gumba dan dalam dada. Penelitian ini dilakukan di Jawa Tengah selama 4 bulan. Lokasi penelitian meliputi lima kabupaten yaitu Sukoharjo, Wonogiri, Pati, Rembang dan Blora. Data panjang badan, lingkar dada, tinggi gumba dan dalam dada diukur dengan menggunakan pita ukur dan mistar ukur diambil dari 116 ekor sapi PO jantan dengan umur 2-3 tahun. Hasil pengukuran panjang badan dan lingkar dada digunakan untuk memprediksi bobot badan sapi. Bobot badan sapi diprediksi dengan menggunakan rumus Lambourne. Variabel bobot badan dan ukuran tubuh sapi di analisis dengan menggunakan analisis variansi model tersarang. Hasil analisis variansi untuk model tersarang yang dipergunakan, serta besarnya komponen variansi yang diestimasi menunjukkan bahwa kecamatan memberikan kontribusi variasi yang kecil terhadap variabilitas bobot dan ukuran tubuh sapi yaitu panjang badan sebesar 9,41%; tinggi gumba sebesar 2,69% ; lingkar dada sebesar 0%, sedang kabupaten memberikan kontribusi yang bervariasi terhadap variabilitas bobot dan ukuran tubuh sapi yaitu bobot badan sebesar 19,82% ; panjang badan sebesar 29,02% ; tinggi gumba sebesar 9,78% ; lingkar dada sebesar 6,26%. Kontribusi variasi error yang dihasilkan besar yaitu panjang badan sebesar 61,58% ; tinggi gumba sebesar 87,52% ; lingkar dada sebesar 93,73% dan bobot badan sebesar 80,2% hal ini diduga disebabkan jumlah data yang sedikit dan tidak seimbang serta faktor- faktor lain yang belum teramati dalam penelitian ini.

(Kata kunci : Sapi Peranakan Ongole, Efek Random, Bobot Badan dan Ukuran Tubuh).

**THE EFFECT OF RANDOM REGENCY AND DISTRICT ON THE VARIABILITY
OF THE BODY WEIGHT AND BODY MEASUREMENTS OF MALE ONGOLE
GRADE CATTLE**

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ABSTRACT

This research was conducted to investigate the effect of random regency and district on the variability of the body weight and body measurements i:e the body length, hearth girth, withers height and chest depth. Five regencies of Sukoharjo, Wonogiri, Pati, Rembang and Blora were involved in this study. Data on the body length, heart girth, withers height and chest depth were obtained with measuring tape and standard ruler from 116 male Ongole grade cattle aged 2 to 3 years old. The body weight and body measurements were used to estimate the body weight. The body weight was estimated with Lambourne formula. The variability of body weight and body measurements were analyzed using analysis of variance for Nested design. The result of the analysis of variance component showed that the district contributed a small amount of variation to the variability of body weight and body measurements, the contribution was 9.41% for body length, 2.69% for wither height and 1.26% for heart girth, while the contribution of regency to the variability of body weight and body measurements was 19.82% to body weight, 29.02% to body length, 6.26% to hearth girth and 5.29% to withers height. The contribution of error variance was large and was 61.58% to body length, 87.52% to withers height, 93.73% to heart girth, 99.75% to chest depth and 80.2% to body weight. These might be because of the amount of data used were small, unbalanced and other factors which were not observed in this study.

(Key words : Ongole Grade Cattle, Random Effect, Body Weight and Body Measurements)