ESTIMASI NILAI HERITABILITAS UKURAN TUBUH FASE *STARTER* F1 HASIL PERSILANGAN AYAM MURUNG PANGGANG DAN AYAM KAMPUNG UNGGUL BALITBANGTAN (KUB)

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INTISARI

Tujuan dari penelitian ini adalah untuk menbandingkan performa ukuran tubuh ayam antar pola perkawinan dan antar pejantan serta mengetahui estimasi nilai heritabilitas per minggu pada ukuran tubuh fase *starter* ayam F1 hasil persilangan ayam Murung Panggang dan ayam Kampung Unggul Balitbangtan (KUB). Penelitian ini dilaksanakan di Semanu, Gunungkidul, Yogyakarta, dengan menggunakan 2 pola perkawinan, yaitu pola perkawinan A (5 ayam Murung Panggang pejantan dan 25 ayam KUB Jatinom betina) dan pola perkawinan B (5 ayam Murung Panggang pejantan dan 25 ayam KUB Bogor betina). Keturunan ayam hasil persilangan dari masing-masing pola perkawinan, diambil data ukuran tubuh (lingkar dada, lebar dada, panjang sayap dan panjang *shank*) ayam pada fase *starter* (umur 2, 4, 6 minggu). Perbandingan performa ukuran tubuh antar pola perkawinan dianalisis menggunakan independent *sample t-test,* kemudian perbandingan performa ukuran tubuh antar perjantan dianalisis menggunakan uji *one-way* anova dilanjutkan dengan uji *duncan test*. Estimasi nilai heritabilitas dianalisa dengan metode korelasi saudara tiri sebapak kemudian komponen ragam dihitung dengan menggunakan analisis ragam Rancangan Acak Lengkap (RAL) pola searah. Hasil perbandingan rata-rata ukuran tubuh ayam pada pola perkawinan B berbeda nyata lebih besar daripada pola perkawinan A ($P<0,05$). Nilai heritabilitas pada pola perkawinan A terdapat kategori rendah (0,01-0,09) dan sedang (0,25), sedangkan pada pola perkawinan B terdapat kategori rendah (0,01-0,08), sedang (0,1-0,25) dan tinggi (0,31-0,65). Hasil estimasi nilai heritabilitas ukuran tubuh ayam dari kedua pola perkawinan bervariasi.

(Kata kunci : ayam Murung Panggang, ayam KUB, heritabilitas, ukuran tubuh)

HERITABILITY ESTIMATION OF BODY SIZE OF CHICKEN FROM CROSSING BETWEEN MALE MURUNG PANGGANG WITH FEMALE KAMPUNG UNGGUL BALITBANGTAN (KUB) IN THE STARTER PHASE

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ABSTRACT

The objective of this study is to conduct a comparative analysis of the body size performance of chickens, focusing on the mating patterns within the population and the differences between males. Additionally, the study aims to estimate the heritability of body size in the starter phase of F1 chickens obtained from the crossbreeding of Murung Panggang chickens and Kampung Unggul Balitbangtan (KUB) chickens. The present study was conducted at Semanu, Gunungkidul, Yogyakarta. This study employed two distinct mating patterns, denoted as mating pattern A and mating pattern B. Mating pattern A involved the pairing of 5 male Murung Panggang chickens with 25 female KUB Jatinom chickens, whereas mating pattern B involved the pairing of 5 male Murung Panggang chickens with 25 female KUB Bogor chickens. Body size measurements, including breast circumference, breast breadth, wing length, and shank length, were collected for the offspring of chickens resulting from various mating patterns at different stages of development (2, 4, and 6 weeks of age). The analysis involved comparing body size performance between different mating patterns using the independent sample t-test. Additionally, the comparison of body size between mating patterns was evaluated using the one-way ANOVA test, followed by the Duncan test. The heritability values were estimated utilizing the half-sibling correlation approach, followed by the calculation of variance components using a one-way pattern Completely Randomized Design (CRD) analysis of variance. The average body size of chickens in mating pattern B exhibited considerably greater results compared to those in mating pattern A ($P<0,05$). The heritability values associated with pattern A exhibit low (0,01-0,09) and medium (0,25) ranges, whereas pattern B encompasses low (0,01-0,08), medium (0,1-0,25), and high (0,31-0,65) ranges. The heritability value of chicken body size exhibited variation in the predicted results across the two mating styles.

(Keywords: Murung Panggang chicken, KUB chicken, heritability, body size)