

## SIFAT FUNGSIONAL TELUR AYAM HASIL SILANGAN AYAM MERAWANG DAN MURUNG PANGGANG DENGAN AYAM KAMPUNG UNGGUL BALITBANGTAN (KUB) JATINOM

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### INTISARI

Telur merupakan bahan pangan hewani yang mengandung protein dan lemak yang dimanfaatkan sebagai bahan pengolahan makanan karena sifat fungsionalnya. Tujuan penelitian ini adalah untuk menganalisis sifat fungsional telur ayam lokal hasil silangan ayam Merawang Sembawa (MSK), Merawang Bangka (MBK) dan Murung Panggang (MPK) dengan ayam KUB Jatinom. Penelitian ini menggunakan telur ayam lokal umur simpan 0 hari dari ayam umur 26 sampai 30 minggu dengan cara pemeliharaan yang sama. Parameter yang diukur meliputi sifat *foaming* (stabilitas, kapasitas dan kepadatan buih), sifat emulsi (stabilitas dan kapasitas emulsi), dan *gelling* (*water holding capacity*). Pengujian dilakukan enam kali pengulangan. Data yang diperoleh dianalisis menggunakan *One Way ANOVA* dan dilanjutkan dengan *Duncan's New Multiple Range Test* (DMRT). Hasil analisis statistik menunjukkan perbedaan signifikan ( $P < 0,05$ ) untuk sifat buih dan emulsi telur ayam MSK, MBK, dan MPK, tetapi tidak berpengaruh untuk sifat gel. Telur ayam MSK memiliki rerata kapasitas buih sebesar 768,333%, kepadatan buih 130,008 mg/mL, stabilitas buih 53,17%, kapasitas emulsi 7,778 ml *oil/g yolk*, stabilitas emulsi 0,101 ml/menit, dan *water holding capacity* 77,747%. Ayam MBK memiliki rerata kapasitas buih sebesar 617,500%, kepadatan buih 152,992 mg/mL, stabilitas buih 45,33%, kapasitas emulsi 9,456 ml *oil/g yolk*, stabilitas emulsi 0,086 ml/menit, dan *water holding capacity* 81,850%. Ayam MPK memiliki rerata kapasitas buih sebesar 550,000%, kepadatan buih 172,980 mg/mL, stabilitas buih 38,33%, kapasitas emulsi 7,778 ml *oil/g yolk*, stabilitas emulsi 0,101 ml/menit, dan *water holding capacity* 77,747%. Kesimpulan penelitian ini yaitu perbedaan jenis silangan diantara ayam lokal dapat mempengaruhi sifat fungsional telur yang dihasilkan. Telur ayam MSK memiliki kapasitas buih dan stabilitas buih paling unggul, sedangkan telur ayam MBK memiliki kapasitas emulsi dan stabilitas emulsi paling unggul. Kepadatan buih yang paling unggul dimiliki telur ayam MPK dan sifat gel putih telur tidak dipengaruhi oleh jenis silangan ayam.

**Kata kunci:** Telur ayam lokal, *Foaming*, *Emulsifying*, *Gelling*.

**FUNCTIONAL PROPERTIES OF CHICKEN EGGS CROSSED BY  
MERAWANG AND MURUNG PANGGANG CHICKEN WITH  
KAMPUNG UNGGUL BALITBANGTAN (KUB)  
JATINOM CHICKEN**

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**ABSTRACT**

Eggs are animal food ingredients that contain protein and lipids that are used as food processing ingredients because of their functional properties. The purpose of this study was to analyze the functional properties of local chicken eggs from crosses of Merawang Sembawa (MSK), Merawang Bangka (MBK) and Murung Panggang (MPK) chickens with KUB Jatinom chickens. This study used local chicken eggs with a shelf life of 0 days from chickens aged 26 to 30 weeks with the same maintenance method. Parameters measured included foaming properties (stability, foam capacity and density), emulsion properties (emulsion stability and capacity), and gelling (water holding capacity). The test was repeated six times. The data obtained were analyzed using One Way ANOVA and followed by Duncan's New Multiple Range Test (DMRT). The results of statistical analysis showed significant differences ( $P < 0.05$ ) for the foam and emulsion properties of chicken eggs MSK, MBK, and MPK, but had no effect on gel properties. MSK chicken eggs had an average foam capacity of 768,333%, a foam density of 130,008 mg/mL, a foam stability of 53,17%, an emulsion capacity of 7,778 ml oil/g yolk, an emulsion stability of 0,101 ml/minute, and a water holding capacity of 77,747%. MBK chicken had an average foam capacity of 617,500%, a foam density of 152,992 mg/mL, a foam stability of 45,33%, an emulsion capacity of 9,456 ml oil/g yolk, an emulsion stability of 0,086 ml/minute, and a water holding capacity of 81,850%. MPK chicken has an average foam capacity of 550,000%, a foam density of 172,980 mg/mL, a foam stability of 38,33%, an emulsion capacity of 7,778 ml oil/g yolk, an emulsion stability of 0,101 ml/minute, and a water holding capacity of 77,747%. The conclusion of this study was the differences in the types of crosses between local chickens can affect the functional properties of the eggs produced. MSK chicken eggs have the most superior foaming capacity and foam stability, while MBK chicken eggs have the most superior emulsion capacity and emulsion stability. The highest foam density was owned by MPK chicken eggs and the gel properties of egg whites were not affected by the type of chicken cross.

**Keywords:** Local chicken eggs, Foaming, Emulsifying, Gelling.