

PENGARUH HABITAT BUDIDAYA LEBAH DI STASIUN PENELITIAN SAWITSARI DAN AREA KAMPUS FAKULTAS BIOLOGI UGM TERHADAP KUALITAS MADU KLANCENG (*Tetragonula laeviceps*, Smith 1857)

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INTISARI

Klanceng (*Tetragonula laeviceps*) merupakan salah satu jenis lebah tanpa sengat yang banyak dibudidayakan karena mampu menghasilkan madu dengan kandungan senyawa yang tinggi serta memiliki nilai ekonomi dan manfaat kesehatan. Penelitian ini bertujuan untuk melakukan perbandingan antara dua lokasi habitat yang berbeda, yaitu Stasiun Penelitian Sawitsari dan Area Kampus Fakultas Biologi Universitas Gadjah Mada, dalam kaitannya dengan karakteristik lingkungan, morfologi dan morfometri klanceng (*T. laeviceps*), serta kualitas madu yang dihasilkan. Metode yang digunakan dalam penelitian ini meliputi pengambilan data lingkungan dengan mengukur suhu lingkungan, kelembapan lingkungan, dan inventarisasi tanaman di lingkungan sekitar. Pengamatan morfologi dan analisis morfometri lebah dilakukan dengan menggunakan Mikroskop Stereo SZ61 dan kamera OptiLab. Madu dari masing-masing koloni dilakukan dengan menggunakan oven untuk mengetahui kadar air, serta metode spektrofotometri untuk mengetahui kandungan hidroksimetilfurfural (HMF). Hasil penelitian menunjukkan bahwa kadar HMF madu dari Stasiun Penelitian Sawitsari sebesar 42,89 mg/kg, sedangkan madu dari Area Kampus Fakultas Biologi UGM sebesar 0,98 mg/kg. Kadar air madu di Stasiun Penelitian Sawitsari sebesar 23,355%, sementara di Area Kampus Fakultas Biologi UGM sebesar 26,312%. Perbedaan nilai kadar HMF dan kadar air tersebut menunjukkan adanya pengaruh perbedaan kondisi habitat dan lingkungan terhadap kualitas madu yang dihasilkan oleh klanceng (*T. laeviceps*).

Kata kunci: HMF, kadar air, morfologi morfometri.

EFFECTS OF BEEKEEPING HABITAT ON THE HONEY QUALITY OF KLANCENG (*Tetragonula laeviceps*, Smith 1857) AT THE SAWITSARI RESEARCH STATION AND FACULTY OF BIOLOGY UGM CAMPUS AREA

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ABSTRACT

Klanceng (*Tetragonula laeviceps*) is one of the stingless bee species that is widely cultivated due to its ability to produce honey with high bioactive compound content, economic value, and health benefits. This study aimed to compare two different habitat locations, namely the Sawitsari Research Station and the Faculty of Biology Campus Area of Universitas Gadjah Mada, in relation to environmental characteristics, as well as the morphology and morphometry of klanceng bees (*T. laeviceps*), and the quality of the honey produced. The methods used in this study included environmental data collection by measuring ambient temperature, ambient humidity, and conducting an inventory of surrounding vegetation. Morphological observations and morphometric analyses of the bees were carried out using an SZ61 Stereo Microscope and an OptiLab camera. Honey samples from each colony were analyzed using the oven method to determine moisture content and spectrophotometric methods to measure hydroxymethylfurfural (HMF) content. The results showed that the HMF content of honey from the Sawitsari Research Station was 42.89 mg/kg, whereas honey from the Faculty of Biology Campus Area of Universitas Gadjah Mada contained 0.98 mg/kg. The moisture content of honey from the Sawitsari Research Station was 23.355%, while that from the Faculty of Biology Campus Area was 26.312%. These differences in HMF and moisture content indicate that variations in habitat and environmental conditions influence the quality of honey produced by klanceng bees (*T. laeviceps*).

Key words: HMF, moisture content, morphology, morphometry.