

INTISARI

Penelitian ini bertujuan mengidentifikasi waktu awal dan puncak infestasi telur *Bactrocera* spp. pada buah salak, serta menganalisis faktor penyebab preferensi oviposisi. Studi ini dilakukan di laboratorium Universitas Gadjah Mada dan kebun salak di Sleman, Yogyakarta, dari September 2024 hingga Juni 2025. Deteksi oviposisi menggunakan Rancangan Acak Lengkap (RAL) dengan 13 perlakuan umur buah salak (120-180 hari setelah penyerbukan/HSP). Pengujian terbagi menjadi *choice test* (5 ulangan, lalat memilih umur buah) dan *no-choice test* (3 ulangan, lalat dihadapkan satu umur buah). Pengamatan meliputi jumlah pupa, imago, telur dan viabilitasnya, panjang venasi sayap, serta parameter fisikokimia buah (kekerasan, dimensi, warna Lab*, kerapatan dan jarak sisik, kadar air, protein). Hasil *choice test* menunjukkan oviposisi pertama di 140 HSP dengan puncak di 160 HSP. Sementara itu, *no-choice test* memperlihatkan oviposisi lebih awal pada 125 HSP dan puncak di 175 HSP. Parameter fitokimia buah salak yang berpengaruh nyata (P-value < 0.05) terhadap preferensi oviposisi meliputi Brix, berat basah, berat kering, lingkar buah, kekerasan buah, nilai *chroma* tengah (L*, b*), nilai *chroma* bawah apikal (L*), kerapatan sisik, dan jarak antar sisik.

Kata kunci: *Bactrocera* spp., buah salak, oviposisi.

ABSTRACT

This study aimed to identify the initial timing and peak oviposition of *Bactrocera* spp. on salak fruit, and to analyze associated influencing factors. The research was conducted from September 2024 to June 2025 at Universitas Gadjah Mada laboratories and a salak orchard in Sleman, Yogyakarta. Oviposition timing was assessed using a Completely Randomized Design (CRD) with 13 salak fruit ages (120-180 days after pollination/DAP) in both *choice* (5 replicates) and *no-choice* (3 replicates) tests. The parameters were observed i.e. Number of pupa and adult, number of egg and its viability, fly wing vein morphometry, and fruit physicochemical parameters such as (hardness, dimensions, color, fruit rind scale density, fruit rind interscale distance, water and protein content). The Results indicated that in *choice tests*, initial oviposition was at 140 DAP, peaking at 160 DAP. In contrast, *no-choice tests* showed earlier oviposition at 125 DAP, peaking at 175 DAP. Adult female oviposition preference were determined by Fruit phytochemical parameters namely Brix, wet and dry weight, fruit circumference, hardness, central chroma values (L^* and b^*), apical bottom chroma (L^*), scale density, and inter-scale distance. These findings highlight the critical role of fruit maturity and physicochemical properties in determining *Bactrocera* spp. oviposition preference.

Keywords: *Bactrocera* spp., oviposition, salak fruit.