

INTISARI

Penelitian ini bertujuan untuk mengetahui kemampuan kolonisasi endofitik *Beauveria bassiana* pada tanaman kailan serta pengaruhnya terhadap perkembangan dan intensitas serangan *Plutella xylostella*, serta pertumbuhan tanaman. Penelitian dilakukan menggunakan Rancangan Acak Kelompok Lengkap (RAKL) dengan 4 perlakuan, yaitu perendaman benih, kontrol perendaman benih, penyemprotan daun, dan kontrol penyemprotan daun yang masing-masing perlakuan terdiri atas 6 ulangan. Inokulasi dilakukan menggunakan suspensi *Beauveria bassiana* dengan kerapatan 1×10^8 blastospora/ml. Hasil penelitian menunjukkan bahwa *Beauveria bassiana* tidak terdeteksi mengkolonisasi jaringan tanaman kailan pada seluruh perlakuan, baik berdasarkan uji kolonisasi maupun deteksi histologi. Aplikasi endofitik juga tidak memberikan pengaruh yang nyata terhadap mortalitas larva, *survival* larva, durasi perkembangan larva dan pupa, pupasi, kemunculan imago, proporsi imago betina, dan intensitas serangan. Selain itu, tidak ditemukan pengaruh yang signifikan terhadap tinggi tanaman dan jumlah daun. Hasil penelitian menunjukkan bahwa aplikasi *Beauveria bassiana* sebagai endofit belum efektif dalam mengendalikan *Plutella xylostella* pada tanaman kailan.

Kata kunci: entomopatogen, endofit, perendaman benih, penyemprotan daun, blastospora.

ABSTRACT

This study aims to determine the endophytic colonization ability of *Beauveria bassiana* in Chinese kale plants as well as its effect on the development and intensity of *Plutella xylostella* infestations, and plant growth. The study was conducted using a with 4 treatments: seed soaking, control (seed soaking), foliar spraying, and control (foliar spraying), each treatment consisting of 6 replicates. Inoculation was performed using a *Beauveria bassiana* suspension with a density of 1×10^8 blastospores/ml. The results showed that *Beauveria bassiana* was not detected colonizing the Chinese kale plant tissues in any of the treatments, based on both colonization tests and histological detection. Endophytic application also did not have a significant effect on larval mortality, larval survival, duration of larval and duration of pupal, pupation, emergence of adults, proportion of female adults, and attack intensity. Additionally, no significant effect was found on plant height and number of leaves. The results showed that the application of *Beauveria bassiana* as an endophyte was not effective in controlling *Plutella xylostella* on Chinese kale.

Key words: entomopathogen, endophyte, seed soaking, foliar spray, blastospore.