

INTISARI

Wereng batang padi cokelat, *Nilaparvata lugens* (Hemiptera: Delphacidae) merupakan salah satu hama penting padi. Hama ini dapat dikendalikan oleh parasitoid telur, namun praktek budidaya pertanian padi belum memperhatikan aktivitas parasitoid dalam ekosistem. Abamektin merupakan insektisida untuk mengendalikan *N. lugens*. Tujuan dari penelitian ini yaitu untuk mengetahui aktivitas parasitoid telur *N. lugens* di lapangan dalam sehari, dan dampak aplikasi insektisida abamektin konsentrasi subletal terhadap kelangsungan hidup parasitoid *Anagrus nilaparvatae*. Telur *N. lugens* dipaparkan pada beberapa waktu yang berbeda untuk mengukur aktivitas parasitoid telur di lapangan. Parasitoid telur *N. lugens* mulai aktif pada pukul 05.00 (12,26% dari total parasitoid yang ditemukan), mencapai puncaknya pukul 11.00 (36,13%), dan mulai mengalami penurunan pada pukul 13.00. Meskipun telur *N. lugens* hanya dipapar selama 2 jam, tingkat parasitasi berkisar mulai 1,12-8,51% pada tanaman 66 hari setelah tanam. Aplikasi abamektin konsentrasi 0,137 ppm (LC₁₀) dan 2,051 ppm (LC₄₀) menggunakan metode kontak dengan tabung reaksi. Aplikasi abamektin menurunkan lama hidup imago *Anagrus nilaparvatae* dan meningkatkan waktu perkembangan keturunannya. Selain itu, abamektin LC₄₀ menurunkan keperidian aktual *A. nilaparvatae* sebesar 11% dan menyebabkan abnormalitas telur dalam ovarium sehingga berdampak terhadap potensi *A. nilaparvatae* sebagai Agens Pengendali hayati (APH). Hal ini menunjukkan bahwa parasitoid telur berperan penting untuk mengelola populasi *N. lugens* dan apabila aplikasi insektisida diperlukan dapat dilakukan pada sore hari.

Kata kunci: *Nilaparvata lugens*, abamektin, parasitoid, *Anagrus nilaparvatae*

ABSTRACT

The rice brown planthopper, *Nilaparvata lugens* (Hemiptera: Delphacidae) is an important pest of rice. This pest is commonly infested by egg parasitoids, but farming practices mostly do not consider the existences of these parasitoids in rice ecosystem. Abamectin is an insecticide used to control *N. lugens*. This study was aimed to determine the activity of parasitoids from the morning to the late afternoon, and the impact of abamectin applied at sublethal concentrations to the survival of the parasitoid *Anagrus nilaparvatae*. The eggs of *N. lugens* were exposed to the rice field at different times to measure the activity of egg parasitoids. The parasitism occurred as early as at 05.00 a.m. (12.26% of the total parasitoid found), reached the highest at 11.00 a.m. (36.13%), and decreased at 01.00 p.m. Although the eggs of *N. lugens* were exposed only for two hours, the parasitism level varied from 1.12 to 8.51% at 66 day after planting. The concentrations of abamectin applied to *A. nilaparvatae* were 0,137 ppm (LC₁₀) and 2,051 ppm (LC₄₀) using contact methods in test tubes. Exposure to abamectin decreased the longevity of adults *A. nilaparvatae* and increased the development time of progeny. Furthermore, the LC₄₀ of abamectin decreased 11% the actual fecundicity of *A. nilaparvatae* by damaging eggs in the ovary which could decrease to potential of *A. nilaparvatae* as a biological control agent. These findings suggest that egg parasitoids play an important role for managing the population of *N. lugens*, and if insecticide is necessary it should be applied in the late afternoon.

Key words: *Nilaparvata lugens*, abamectin, parasitoids, *Anagrus nilaparvatae*