

INTISARI

Tujuan dari penelitian ini adalah untuk mengetahui efek dari tanaman refugia terhadap keanekaragaman dan kelimpahan populasi. Pengamatan dilakukan pada lahan pertanaman padi di Seyegan dan Prambanan. Pada setiap lokasi dipilih dua lahan dengan satu lahan diberikan perlakuan refugia dan satu lahan lain tanpa tanaman refugia. Pengamatan dilakukan sebanyak 9 kali waktu pengamatan pada 7, 8, 9, 10, 11, 12, 13, 14, dan 15 minggu setelah tanam menggunakan alat d-vac, jaring, dan pitfall. Serangga yang ditemukan diidentifikasi dan indeks Shannon-Wiener dan Simpson digunakan untuk mengetahui keanekaragaman. Sembilan ordo, 51 familia, dan 3.857 individu serangga berhasil diidentifikasi. Hasil penelitian menunjukkan bahwa keanekaragaman dan kelimpahan serangga di lahan dengan tanaman refugia lebih tinggi (Indeks keragaman 3,37 di lahan Seyegan dan 3,03 di lahan Prambanan) daripada keragaman serangga di lahan tanpa tanaman refugia (indeks keragaman 2,95 di lahan Seyegan dan 2,34 di lahan Prambanan). Parasitasi parasitoid telur wereng batang cokelat lebih tinggi di lahan dengan refugia (21,27 dan 21,45% untuk Seyegan dan Prambanan secara berurutan) daripada parasitasi parasitoid di lahan tanpa refugia (15,12 dan 10,82% untuk lahan di Seyegan dan Prambanan secara berurutan). Hal ini menunjukkan bahwa tanaman refugia dapat meningkatkan kelimpahan dari musuh alami dan meningkatkan efektifitas pengendalian populasi hama wereng batang cokelat.

Kata kunci : tanaman refugia, musuh alami, parasitoid telur, wereng batang cokelat.

ABSTRACT

The aim of this study was to determine the effect of plant refuge on the density and diversity of natural enemies of the rice brown planthopper. The survey was conducted in Seyegan and Prambanan. In each location, two fields were selected, one with flowering plants (sunflower, sesame, and cockscomb) as refuge plants and the other without refuge. Observations were carried out nine times at 7, 8, 9, 10, 11, 12, 13, 14, and 15 weeks after transplanting using d-vac, net, and pitfall. The collected insects were identified and the Shannon-Wiener and Simpson diversity index was used to measure their diversity. Nine orders, 51 families, and 3.857 individuals of insect were collected. The diversity of insect in rice field with refuge plants was higher (diversity index of 3,37 for Seyegan and 3,03 for Prambanan) than in non-refuge (diversity index of 2,95 for Seyegan and 2,34 for Prambanan). Parasitism of the brown planthopper egg was higher in the presence of refuge (21,27 and 21,45% for Seyegan and Prambanan, respectively) than the one in the rice field without refuge (15,12 and 10,82% for Seyegan and Prambanan, respectively). These findings suggest that selective refuge plants have beneficial effect for density and diversity of natural enemies, which may increase their effectiveness in controlling the rice brown planthopper.

Keywords : plant refuge, natural enemies, egg parasitoids, brown planthopper.