

Intisari

Kajian ini dimaksudkan untuk mengetahui dampak samping negatif aplikasi asap cair tempurung kelapa (ACTK) untuk pengendalian hama padi sawah terhadap musuh alami. ACTK murni sangat asam (pH 1,2) dinetralkan dengan penambahan kapur tohor 7 gram/100 ml. Seri dosis ACTK netral yakni 0%, 6,25%, 12,5%, 25% disemprotkan sebanyak 300-500 l/ha tergantung umur padi, pada 7, 21, 35, 49, 56, 63, 70 dan 77 hst. Pengamatan populasi kompleks musuh alami dilakukan pada pagi hari, satu hari setelah aplikasi. Indeks keragaman dan populasi kompleks musuh alami sebagai parameter analisis dampak ACTK. Hasil kajian menunjukkan bahwa ACTK relatif aman terhadap kompleks musuh alami hama padi sawah. Aplikasi ACTK tidak berdampak signifikan terhadap pengurangan jumlah jenis musuh alami. Kelompok predator yang ditemukan meliputi ordo Odonata, Orthoptera, Hemiptera, Coleoptera, Arachnida, dan semut, serta kelompok parasitoid meliputi ordo Diptera dan Hymenoptera. Namun ACTK pada dosis 12,5% mengurangi signifikan nilai kumulatif Indeks Shannon-Wiener sebesar 14,18% dari kontrol. Sementara itu ACTK dosis 6,25% mengurangi signifikan populasi belalang predator sebesar 36,47% dari kontrol. Pengurangan nilai kumulatif Indeks Shannon-Wiener dan populasi belalang predator tersebut relatif tidak bermakna karena populasi musuh alami yang sangat rendah yaitu <1 ekor/rumpun.

Kata kunci: Asap cair tempurung kelapa, padi, predator, parasitoid

Abstract

The study was intended to observe the negative side effect of coconut-cell liquid smoke (CCLS) application for controlling rice pests against natural enemies. The genuine CCLS is very acid (pH 1.2), it was neutralized by adding the Calcium Oxide ca 7 g/100 ml. Serial dosage rates of the neutral CCLS i.e. 0%, 6.25%, 12.5%, 25%, were sprayed with rates of 300-500 l/ha depending on rice age, on 7, 21, 35, 49, 56, 63, 70 and 77 dap. Observations of the population of natural enemies complex were conducted in the morning, one day after application. Diversity index and population density of the natural enemies complex were used as parameters of CCLS impact. Results showed that the CCLS was relatively safe against natural enemies complex. The CCLS application did not significantly reduce number of the natural enemies species. The observed predator groups comprised of Order Odonata, Orthoptera, Hemiptera, Coleoptera, Arachnida, and ants. Meanwhile, the parasitoid group comprised of Order Diptera and Hymenoptera. Nevertheless, CCLS at dose rate of 12.5% significantly reduced cumulative values of Shannon-Wiener index approximately 14.18% from control. The CCLS at dose rate of 6.25% reduced significantly populations of predatory grasshopper approximately 36.47% from control. Because of population density of the natural enemies was very low (<1 individu/hill), the reduction impact was not meaningful.

Key words : coconut-cell liquid smoke, rice, predator, parasitoid