

**EKSPLORASI KELIMPAHAN ARTHROPODA PADA POLA
TANAM TUMPANG SARI CABAI RAWIT (*Capsicum frutescens*
L.) BAWANG MERAH (*Allium ascalonicum* L.) DAN
MONOKULTUR CABAI RAWIT (*Capsicum frutescens* L.)**

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ABSTRAK

Pola tanam berpengaruh terhadap kelimpahan arthropoda dan tingkat serangan hama pada budidaya cabai rawit, sehingga perlu dikaji untuk mengetahui sistem budidaya yang lebih efektif. Penelitian ini bertujuan untuk membandingkan kelimpahan serangga, intensitas serangan hama, dan bobot buah pada sistem tumpangsari cabai rawit–bawang merah dan monokultur cabai rawit. Penelitian ini menggunakan metode *experimental design* dengan pengamatan lapangan pada kedua sistem tanam. Hasil penelitian menunjukkan bahwa kedua sistem memiliki jumlah genus arthropoda yang sama, yaitu 110 genus. Sistem tumpangsari menghasilkan 13.610 individu dengan indeks keanekaragaman *Shannon-Wiener* $H' = 3,8647$, sedangkan monokultur menghasilkan 12.868 individu dengan $H' = 3,7457$. Intensitas serangan hama pencucuk penghisap pada monokultur sebesar 71,11%, lebih tinggi daripada tumpangsari 66,67%. Intensitas serangan hama pemakan daun pada monokultur sebesar 53,33%, lebih tinggi daripada tumpangsari 44,44%. Sebaliknya, intensitas serangan lalat buah lebih tinggi pada tumpangsari, yaitu 30,48%, dibandingkan monokultur 23,37%. Total bobot buah tumpangsari sedikit lebih tinggi, yaitu 2.938,5 g, dibandingkan monokultur 2.927,3 g.

Kata kunci: cabai rawit, tumpangsari, monokultur, arthropoda, intensitas serangan, bobot buah.

**EXPLORATION OF ARTHROPOD ABUNDANCE IN
INTERCROPPING SYSTEMS OF CAYENNE PAPPER
(*Capsicum frutescens* L.) AND RED ONIONS (*Allium ascalonicum*
L.) AND IN A CAYENNE PAPPER (*Capsicum frutescens* L.)
MONOCULTURE**

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ABSTRACT

Crop patterns influence arthropod abundance and pest attack levels in bird's eye chili cultivation; therefore, they need to be studied to identify more effective cultivation systems. This study aimed to compare insect abundance, pest attack intensity, and fruit weight between a chili-red onion intercropping system and a chili monoculture. The study employed an experimental design with field observations of both cropping systems. The results showed that both systems had the same number of arthropod genera, namely 110 genera. The intercropping system yielded 13,610 individuals with a *Shannon-Wiener* diversity index $H' = 3.8647$, while the monoculture yielded 12,868 individuals with $H' = 3.7457$. The infestation intensity of sucking pests in the monoculture was 71.11%, higher than that in the intercropping system at 66.67%. The infestation intensity of leaf-eating pests in the monoculture was 53.33%, higher than that in the intercropping system at 44.44%. Conversely, the intensity of fruit fly infestation was higher in the intercropping system, at 30.48%, compared to 23.37% in the monoculture. The total fruit weight in the intercropping system was slightly higher, at 2,938.5 g, compared to 2,927.3 g in the monoculture.

Keywords: cayenne pepper, intercropping, monoculture, arthropods, pest infestation level, fruit weight