

Cabai (*Capsicum annum* L.) dan sawi (*Brassica juncea* L.) merupakan tanaman hortikultura yang dapat dimanfaatkan sebagai sumber makanan. Penerapan modifikasi sistem tanam diharapkan mampu mencegah kehilangan hasil akibat serangan arthropoda hama. Belum banyak penelitian mengenai modifikasi sistem tanam yang mampu menekan pertumbuhan hama. Penelitian ini bermanfaat dalam memperbaiki keseimbangan ekosistem akibat dari penggunaan pestisida kimia dalam pengendalian OPT. Penelitian ini dilaksanakan pada bulan Maret sampai dengan bulan Desember 2021 di Gentan, Sinduharjo, Ngaglik, Sleman, Yogyakarta dan identifikasi arthropoda dilakukan di Laboratorium Ilmu Hama Tanaman Departemen Hama dan Penyakit Tumbuhan, Fakultas Pertanian, Universitas Gadjah Mada, Yogyakarta. Analisis data arthropoda yang digunakan adalah indeks kekayaan jenis, indeks kemerataan, indeks keanekaragaman dan dominansi. Hasil penelitian ini menunjukkan keanekaragaman arthropoda pada lahan pembibitan cabai dan sawi perlakuan monokultur dengan polikultur tidak berbeda nyata. Indeks keanekaragaman pada perlakuan monokultur cabai bernilai 2,49, pada monokultur sawi bernilai 2,58, pada polikultur cabai-sawi bernilai 2,63 dan pada polikultur sawi-cabai bernilai 2,66. Hasil produksi bibit tanaman cabai dan sawi dengan perlakuan polikultur relatif lebih tinggi dibandingkan dengan perlakuan monokultur.

Kata kunci: arthropoda, keanekaragaman, cabai, sawi, monokultur, polikultur

Chilli (*Capsicum annum* L.) and mustard (*Brassica juncea* L.) are horticultural plants that can be used as food sources. The application of cropping system modification is expected to be able to prevent yield loss due to pest arthropod attacks. There has not been much research on modifications to cropping systems that can suppress pest growth. This research is useful in improving the balance of the ecosystem as a result of the use of chemical pesticides in pest control. The study was conducted from March to December 2021. The study was conducted in Gentan Hamlet, Sinduharjo Village, Kapanewon Ngaglik, Sleman Regency, Yogyakarta Special Region Province and the arthropods identification was done in the Laboratory of Entomology, Department of Pest and Plant Diseases, Faculty of Agriculture, Universitas Gadjah Mada, Yogyakarta. The data analysis of arthropods used is index of species richness, index of evenness, index of diversity and dominance. The results of research showed that the diversity of arthropods in chilli and mustard nurseries with monoculture and polyculture treatments insignificantly. The diversity index in the chilli monoculture treatment is 2.49, the mustard monoculture is 2.58, the chilli-mustard polyculture is 2.63 and the mustard-chilli polyculture is 2.66. The result on chilli and mustard seed production with polyculture treatment was relatively higher than monoculture treatment.

Keywords: arthropod, diversity, chilli, mustard, monoculture, polyculture