Intisari

Tanaman cabai (*Capsicum* sp.) merupakan salah satu komoditas penting di Indonesia. Salah satu hama yang menyerang tanaman cabai adalah nematoda puru akar (*Meloidogyne incognita*). Serangan nematoda tersebut mengakibatkan produksi tanaman cabai di seluruh dunia mengalami penurunan hasil sebesar 12,2%. Salah satu strategi untuk mengurangi dampak buruk tersebut adalah dengan menanam tanaman cabai yang memiliki gen tahan terhadap nematoda puru akar. Penelitian ini dilakukan untuk mengetahui tingkat ketahanan 30 aksesi cabai. Penelitian ini dilakukan dengan mempelajari pengaruh eksudat akar terhadap penghambatan penetasan telur nematoda, serta respon aksesi cabai terhadap serangan *M. incognita*. Parameter yang diamati yaitu jumlah telur yang tidak menetas, indeks puru, tinggi tanaman, panjang akar, serta populasi total nematoda pada masing-masing nomor aksesi. Penelitian ini dilakukan di Rumah Kaca dan Laboratorium Nematologi, Program Studi Hama Penyakit Tumbuhan, Fakultas Pertanian, Universitas Gadjah Mada dari bulan Juli 2021 hingga November 2021. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan perlakuan 30 aksesi cabai dan 3 ulangan. Hasil penelitian menunjukkan ketahanan cabai yang diuji berdasarkan indeks puru didapatkan 5 aksesi tahan, 17 aksesi cukup tahan, 7 aksesi cukup rentan, dan 1 aksesi rentan. Sedangkan berdasarkan indeks faktor reproduksi didapatkan 4 aksesi tahan, 23 aksesi cukup tahan, dan 3 aksesi cukup rentan.

Kata kunci : aksesi, respon, *Meloidogyne incognita*, *Capsicum* sp.

Abstract

Chili (*Capsicum* sp.) is an important commodity. In Indonesia, chili is one of the mainstay commodities. One of the pests that can attack chili is root-knot nematode (*Meloidogyne incognita*). The nematode attack caused the production of chili in the worldwide decrease by 12.2%. For this reason, if founded chili plants that have resistant genes from nematode attack, it will be very useful. This research was conducted to determine the resistance level of 30 chili accessions. This research was conducted using 30 chili accessions by looking at the effect of root exudates on the inhibition of nematode egg hatching and looking at the response of chili accessions to *M. incognita* attack. The parameters observed were the number of eggs that didn't hatch, gall index, plant height, root length, and the total population of nematodes in each accession number. This research was conducted at the Greenhouse and Nematology Laboratory, Departement of Plant Disease Pest, Faculty of Agriculture, Gadjah Mada University from July 2021 until November 2021. This study used a Completely Randomized Design (CRD) with treatment of 30 chili accessions and 3 replications. The results showed that the resistance of chili based on index of galls, there were 5 accessions that were resistant, 17 accessions were moderately resistant, 7 accessions were moderately susceptible, and 1 accession was susceptible. Meanwhile, based on the index of reproductive factors, there were 4 accessions that were resistant, 23 accessions were moderately resistant, and 3 accessions were moderately suspectible.

Keywords : accessions, response, *Meloidogyne incognita*, *Capsicum* sp.