



INTISARI

Cabai (*Capsicum annuum*) merupakan salah satu jenis sayuran penting di Indonesia. Salah satu kendala dalam budidaya cabai adalah nematoda *Meloidogyne incognita* yang dapat menyebabkan puru pada sistem perakaran. Penelitian ini bertujuan untuk mengetahui, 1. respons beberapa varietas cabai terhadap infeksi *M. incognita*, 2. intensitas kerusakan yang diakibatkan *M. incognita* pada akar beberapa varietas cabai, 3. perkembangan populasi *M. incognita* pada daerah perakaran beberapa varietas cabai. Penelitian ini dilaksanakan di Sub-Laboratorium Nematologi dan Rumah Kaca Nematologi Pertanian, Fakultas Pertanian, Universitas Gadjah Mada. Kegiatan penelitian yang dilakukan meliputi perbanyakan *M. incognita*, persiapan dan pemeliharaan tanaman uji, inokulasi *M. incognita* pada tanaman uji, dan pengamatan. Pengamatan yang dilakukan meliputi aspek agronomis, histopatologi akar tanaman uji, intensitas kerusakan akar, dan populasi nematoda. Hasil penelitian menunjukkan bahwa varietas cabai yang diinokulasi menunjukkan respons berupa perbedaan berat dan panjang akar sebagai aspek agronomis, tingkat sensitifitas yang sama berdasarkan intensitas kerusakan akar dan skoring *egg mass M. incognita*, munculnya lignifikasi, serta perkembangan populasi nematoda pada tanah sekitar perakaran dan jaringan akar tanaman terhadap infeksi L2 *M. incognita*.

Kata kunci: Respons Tanaman Inang, Cabai, *M. incognita*.



ABSTRACT

Chilli Pepper (*Capsicum annuum*) is one of the major vegetable commodity in Indonesia. One of the obstacles in Chilli Pepper cultivation is the infection of *Meloidogyne incognita* which cause gall formation in the root system. The purpose of this research were to know 1. the response of some Chilli Pepper varieties upon *M. incognita* infection, 2. disease intensity in the root system, 3. development of *M. incognita* population in the root system (rhizosphere). This research was conducted in Sub-Laboratory of Nematology and Greenhouse, Faculty of Agriculture, Universitas Gadjah Mada. The methodology in this research included cultivation of chili pepper plant, rearing of *M. Incognita*, inoculation, and observation. The observation that was conducted consists of agronomy aspect of the plants, root histopathology observation, disease intensity, and nematode population. The result of this research showed that each of Chilli Pepper variety expressed various response prior infection. All varieties had different root weight and length as agronomy aspects but it have same sensitivity by looking at root damage and egg mass scoring of *M. incognita*. Although nematode population could develop in the root area, observation from root tissues showed that there was lignification prior infection with J2 *M. incognita*.

Keywords: Host Plant Response, Chilli Pepper, *M. incognita*.