



INTISARI

Trichoderma merupakan salah satu agens hayati yang diketahui mampu menekan berbagai penyakit tumbuhan dan beberapa di antaranya mampu berperan sebagai *Plant Growth Promoting Fungi* (PGPF). Penelitian ini dilakukan di Laboratorium IPT Klinik Jurusan Hama dan Penyakit Tumbuhan, dan rumah kaca Fakultas Pertanian Universitas Gadjah Mada Yogyakarta dengan tujuan untuk mengetahui pengaruh *Trichoderma* terhadap pertumbuhan tanaman cabai dalam mengendalikan penyakit layu *Fusarium oxysporum* pada tanaman cabai. Isolat *Trichoderma* digunakan untuk penelitian ini adalah isolat PGI, JBI, TH-R.12, PRK, SWK, TH-LH, dan TH-UH. Penelitian dilakukan menggunakan Rancangan Acak Lengkap (RAL) dengan 9 perlakuan dan masing – masing 5 perlakuan. Analisis data menggunakan Analisis Varian (ANOVA). Apabila dari hasil terdapat beda nyata dilakukan uji DMRT dengan taraf kepercayaan 95%. Hasil pengujian menunjukkan bahwa ketujuh isolat *Trichoderma* sp. yang diaplikasikan ke tanaman cabai mampu menekan perkembangan penyakit layu Fusarium, namun tidak memiliki kemampuan sebagai *Plant Growth Promoting Fungi* (PGPF). Pertumbuhan tanaman paling baik saat pengujian PGPF adalah pada *Trichoderma asperellum* isolat TH-LH, sedangkan *Trichoderma asperellum* isolat TH-UH paling efektif menekan perkembangan penyakit layu fusarium.

Kata Kunci: cabai, layu fusarium, *Trichoderma*



ABSTRACT

Trichoderma is one of the biological control agents that are known to suppress the plant disease and some of *Trichoderma* are able to act as plant growth promoting fungi (PGPF). The aims of this research were to determine the effect of *Trichoderma* on the growth of chili plant and determine the effect of *Trichoderma* in controlling fusarium wilt disease of chili. This research was conducted at the Laboratory of Clinical Plant Disease Department of Plant Pests and Disease and th greenhouse of Faculty of Agriculture, Universitas Gadjah Mada. *Trichoderma* spp. isolates used for this research were PGI, JBI, TH-R.12, PRK, SWK, TH-LH, and TH-UH. The research was conducted using a completely randomized design (CRD) with 9 treatments and each treatment 5 replications. Tests were conducted in this research were the effect of *Trichoderma* on chili plant growth for the development of fusarium wilt disease in chili. Data analysis used Analysis of Variance (ANOVA), the result were significantly different, it was continued with DMRT test with a level of 95 %. The results showed that all isolates of *Trichoderma* application to chili plant were capable to suppress the development of fusarium wilt disease, but did not have ability as plant growth promoting fungi (PGPF). The best plant growth on PGPF test was *Trichoderma asperellum* TH-LH isolate. *Trichoderma asperellum* TH-UH isolate was the most effective suppressed the development of Fusarium wilt disease.

Keyword: chili, fusarium wilt, *Trichoderma*