

Rachel Sukma Larasati 170311100042. Potensi *Trichoderma* sp. Sebagai Agen Pengendali Serangan *Fusarium oxysporum* pada Tanaman Tomat (*Lycopersicum esculentum* Mill.). Dibimbing Oleh: Ir. Achmad Djunaedy M.P dan Dr. Ir. Gita Pawana, M.Si.

ABSTRAK

Trichoderma sp. memiliki potensi sebagai agen pengendali hayati dan mampu untuk mengendalikan penyakit pada tanaman tomat. Salah satu penyakit utama pada tanaman tomat adalah *Fusarium oxysporum*. Penelitian ini bertujuan untuk mengetahui waktu aplikasi *Trichoderma* sp. yang tepat dalam mengendalikan layu *F. oxysporum* pada tanaman tomat. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan variasi waktu pemberian suspensi *Trichoderma* sp. pada 14 hari sebelum tanam, 7 hari sebelum tanam, saat tanam dan 7 hari setelah tanam. Pengamatan dilakukan selama masa vegetatif tanaman yaitu 30 hari setelah tanam. Data yang diperoleh meliputi tingkat keterjadian serangan, tingkat keparahan, tinggi tanaman, jumlah daun, jumlah akar, berat basah tanaman dan biomassa yang dianalisis dengan ANSIRA taraf 5% dan jika hasil signifikan dilanjutkan uji BJND dengan taraf ketelitian 5%. Perlakuan pemberian *Trichoderma* sp. pada 14 hari sebelum tanam memberikan hasil paling efektif dalam mengatasi serangan penyakit layu *F. oxysporum* dengan persentase tingkat keparahan sebesar 6% dan memberikan pertumbuhan tanaman tomat terbaik dengan rata-rata tinggi tanaman 40,38 cm, rata-rata jumlah daun 8 helai, rata-rata akar sekunder 86, rata-rata berat basah tanaman 27,47 gram dan rata-rata biomassa tanaman 1,50 gram.

Kata kunci : *Trichoderma* sp., *Fusarium oxysporum*, tanaman tomat.

Rachel Sukma Larasati 170311100042. Potential of *Trichoderma* sp. as Attack Control Agent *Fusarium oxysporum* on Tomato Plants (*Lycopersicum esculentum* Mill.). Advisor: **Ir. Achmad Djunaedy M.P and Dr. Ir. Gita Pawana, M.Si.**

ABSTRACT

Trichoderma sp. has the potential as a biological control agent and is able to control diseases in tomato plants. One of the main diseases in tomato plants is *Fusarium oxysporum*. The purpose of this study was to determine the application time of *Trichoderma* sp. in controlling *F. oxysporum* wilt in tomato plants. This study used a Completely Randomized Design (CRD) with variations in the time of suspension of *Trichoderma* sp. on 14 days before planting, 7 days before planting, at planting and 7 days after planting. Observations were made during the vegetative period of the plant, which is 30 days after planting. The data obtained included the level of attack occurrence, severity, plant height, number of leaves, number of roots, plant wet weight and biomass which were analyzed by ANSIRA level of 5% and if the results were significant, continued with the BJND test with an accuracy level of 5%. Treatment of *Trichoderma* sp. 14 days before planting gave the most effective results in overcoming *F. oxysporum* wilt disease with a percentage of 6% severity and provide the best tomato plant growth with an average plant height of 40.38 cm, an average number of leaves 8, an average secondary root of 86, an average plant wet weight of 27.47 grams and an average plant biomass of 1, 50 grams.

Keywords: *Trichoderma* sp., *Fusarium oxysporum*, tomato plants.