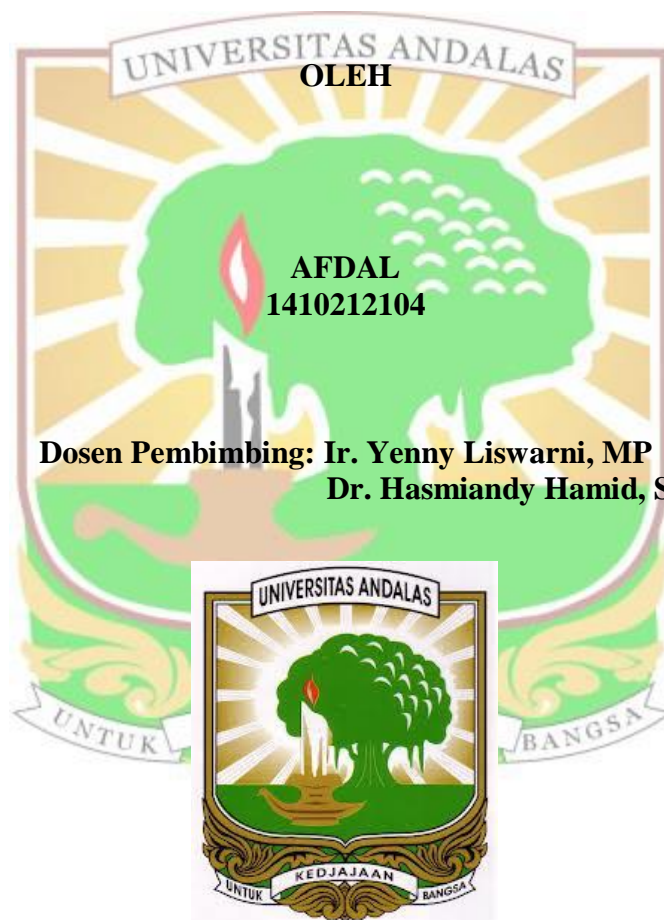


**Pengaruh Konsorsium Bakteri Endofit Dalam Menginduksi
Ketahanan Tomat Terhadap *Bemisia tabaci* Genn. (Hemiptera:
Aleyrodidae) dan Pertumbuhan Tanaman**

SKRIPSI



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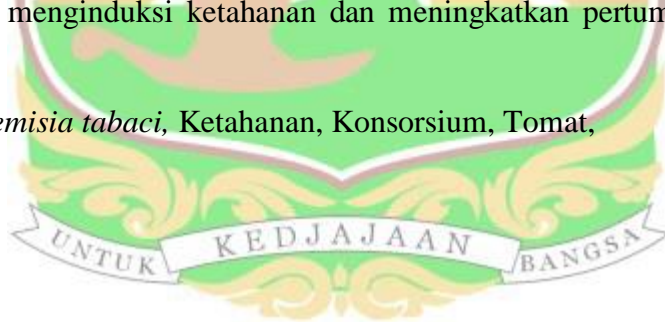
2020

Pengaruh Konsorsium Bakteri Endofit Dalam Menginduksi Ketahanan Tomat Terhadap *Bemisia tabaci* Genn. (Hemiptera: Aleyrodidae) dan Pertumbuhan Tanaman

ABSTRAK

Konsorsium bakteri endofit merupakan gabungan dari beberapa bakteri berbeda yang saling bersinergis dan dapat meningkatkan ketahanan tanaman terhadap hama dan patogen serta pertumbuhan tanaman. Penelitian untuk mendapatkan konsorsium bakteri endofit yang mampu meningkatkan ketahanan tanaman terhadap *Bemisia tabaci* dan pertumbuhan tanaman tomat. Penelitian ini berbentuk percobaan dengan menggunakan metode Rancangan Acak Lengkap (RAL) yang terdiri atas 6 konsorsium bakteri endofit, kontrol negatif (tanaman diberi pestisida) dan kontrol positif (tanpa pestisida). Penelitian dilaksanakan di Laboratorium Mikrobiologi dan Rumah Kaca Fakultas Pertanian, Universitas Andalas, Padang dari bulan Juni sampai Agustus 2019. Pengujian konsorsium bakteri endofit dilakukan dua tahap, yaitu melihat pengaruh konsorsium terhadap populasi *B. tabaci* dan untuk melihat pengaruh konsorsium terhadap pertumbuhan tanaman. Introduksi konsorsium bakteri endofit dilakukan pada benih dan akar tanaman tomat. Parameter yang diamati adalah populasi *B. tabaci*, persentase tanaman bergejala virus dan pertumbuhan tanaman (Daya Kecambah, tinggi dan jumlah daun). Data dianalisis dengan Uji F taraf nyata 5%, apabila ada perbedaan maka dilanjutkan dengan Uji Beda Nyata Terkecil (BNT). Hasil penelitian menunjukkan bahwa konsorsium ETL 2.3+EKL 3.3 merupakan konsorsium yang terbaik dalam menginduksi ketahanan dan meningkatkan pertumbuhan tanaman tomat.

Kata kunci: *Bemisia tabaci*, Ketahanan, Konsorsium, Tomat,



The Effect of Endophytic Bacteria Consortium in Inducing Resistance of Tomato to *Bemisia tabaci* Genn. (Hemiptera: Aleyrodidae) and Plant Growth

ABSTRACT

The endophytic bacterial consortium is a combination of several different bacteria that synergize with each other and can increase plant resistance to pests, pathogens, and plant growth. The research aimed to obtain a consortium of endophytic bacteria that could increase plant resistance to *Bemisia tabaci* and tomato plant growth. This study was an experimental study using the Completely Randomized Design (CRD) method consisting of 6 endophytic bacterial consortia, negative control (plants were given pesticides) and positive controls (without pesticides). The study was conducted at the Microbiology and Greenhouse Laboratory of the Faculty of Agriculture, Universitas Andalas, Padang, from June to August 2019. The endophytic bacterial consortia test was conducted in two stages, namely to know the effect of the consortium on the *B. tabaci* population and the impact of the consortium on plant growth. The introduction of a consortium of endophytic bacteria was conducted in the seeds and roots of tomato plants. The variables observed were *B. tabaci* population, percentage of virus symptomatic plants, and plant growth (germination rate, height, and many leaves). Data were analyzed with an F-level of 5% significance, and if there were differences, it was continued with the Least Significant Difference Test (LSD). The results showed that the ETL 2.3 + EKL 3.3 was the best consortium in inducing resilience and increasing tomato plant growth.

Keywords: *Bemisia tabaci*, Consortium, Tomato, resistance

