ABSTRAK

ANALISIS KERAGAMAN DAN KELIMPAHAN NEMATODA SERTA PERTUMBUHAN TANAMAN JAMBU KRISTAL PASCA IMPLEMENTASI *NETAMAX-FP UNILA* PADA LAHAN RELOKASI

Oleh

FATIMAH AZ ZAHRA

Nematoda merupakan salah satu OPT yang dapat menyebabkan kerusakan signifikan pada tanaman jambu biji kristal. Infeksi nematoda dapat menghambat pertumbuhan tanaman sehingga menurunkan hasil panen. Gejala serangan nematoda umumnya tidak menunjukkan tanda-tanda khas atau spesifik. Secara umum, tanaman yang terinfeksi terlihat kerdil, pertumbuhan terhambat, daun menguning dan ukurannya lebih kecil. Salah satu metode pengendalian yang dilakukan adalah dengan menggunakan bionematisida berbahan aktif jamur *Purpureocillium lilacinum* pada aplikasi *Netamax-FP Unila*. Penelitian ini bertujuan mempelajari keragaman dan kelimpahan genus nematoda pada tanaman jambu kristal setelah aplikasi dan mempelajari dampak *Netamax- FP Unila* terhadap pertumbuhan tanaman jambu kristal. Penelitian dilaksanakan dari September 2023 sampai Januari 2024 di lahan perkebunan jambu kristal PT Great Giant Food Lampung Tengah Plantation Group 1, Kelurahan Terbanggi Besar, Kabupaten Lampung Tengah dan Laboratorium Ilmu Hama Tumbuhan Fakultas Pertanian Universitas Lampung. Sampel tanah diambil dari lahan pertanaman jambu PT Great Giant Food, Kabupaten Lampung Tengah. Area sekitar batang tanaman dibersihkan dari serasah dengan jarak 50 cm dari batang utama. Tanah digali sedalam 5 cm sebelum aplikasi. Kompos, biopestisida, dan Netamax-FP Unila masing-masing ditaburkan sebanyak 5 kg per tanaman di lubang melingkari tanaman, kemudian dicampur merata menggunakan cangkul. Hasil penelitian menunjukkan bahwa *Netamax-FP Unila* berbahan dasar jamur *P. lilacinum* efektif mempengaruhi kelimpahan dan keragaman nematoda pada tanaman jambu kristal relokasi dan *Netamax-FP Unila* berbahan dasar jamur *P. lilacinum* meningkatkan pertumbuhan tanaman jambu kristal relokasi, menghasilkan tinggi tanaman yang lebih baik dibandingkan perlakuan tanpa *Netamax-FP Unila*.

Kata kunci: bionematisida, biopestisida, *Netamax-FP Unila*

ABSTRACT

ANALYSIS OF DIVERSITY AND ABUNDANCE OF NEMATODES AND GROWTH OF CRYSTAL GUAVA PLANTS POST-APPLICATION OF *NETAMAX-FP UNILA* IN RELOCATION LAND

By

FATIMAH AZ ZAHRA

Nematodes are one of the plant pests that can cause significant damage to crystal guava plants. Nematode infection can inhibit plant growth, thereby reducing harvest yields. Symptoms of nematode infestation generally do not show specific or distinctive signs. Typically, infected plants appear stunted, experience growth inhibition, and exhibit yellowing leaves with smaller sizes. One control method implemented is the use of a bio-nematicide containing the active fungus *Purpureocillium lilacinum* in the *Netamax-FP Unila* application. This study aims to examine the diversity and abundance of nematode genera in crystal guava plants post-application and to evaluate the impact of *Netamax-FP Unila* on the growth of crystal guava plants.The research was conducted from September 2023 to January 2024 at the crystal guava plantation of PT Great Giant Food Lampung Tengah Plantation Group 1, Terbanggi Besar Village, Central Lampung Regency, and at the Plant Pest Science Laboratory, Faculty of Agriculture, Universitas Lampung. Soil samples were collected from the plantation area of PT Great Giant Food, Central Lampung Regency. The area around the plant stems was cleared of litter within a 50 cm radius from the main stem. Soil was excavated to a depth of 5 cm before application. Compost, bio-pesticide, and *Netamax-FP Unila* were each applied at 5 kg per plant into circular trenches around the plants, then mixed evenly using a hoe.The results showed that Netamax-FP Unila, based on the fungus *P. lilacinum*, effectively influenced the abundance and diversity of nematodes in relocated crystal guava plants. Additionally, *Netamax-FP Unila* enhanced the growth of relocated crystal guava plants, resulting in better plant height compared to treatments without Netamax-FP Unila.

Keywords: bio-nematicide, bio-pesticide, Netamax-FP Unila