

ABSTRAK

KEEFEKTIFAN BIONEMATISIDA NETAMAX-FP UNILA DALAM MENGENDALIKAN NEMATODA PARASIT TUMBUHAN PADA GUAVA KRISTAL BERPRODUKSI

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Penurunan umur produktif tanaman guava kristal (*Psidium guajava* L.) berproduksi di PT GGF diduga karena serangan nematoda parasit tumbuhan. Salah satu pengendalian yang dapat dilakukan adalah pengendalian secara hayati menggunakan bionematisida berupa kompos yang diperkaya dengan jamur *Purpureocillium lilacinum*. Penelitian ini bertujuan untuk mengetahui keefektifan bionematisida Netamax-FP Unila dalam mengendalikan populasi nematoda parasit tumbuhan pada tanaman guava kristal berproduksi di PT GGF. Penelitian dilaksanakan pada September hingga Juni 2024 di PT GGF Lampung Tengah dan Laboratorium Ilmu Hama Tumbuhan, Fakultas Pertanian, Universitas Lampung. Percobaan disusun menggunakan Rancangan Acak Kelompok (RAK) dengan tiga perlakuan dan 20 ulangan. Tiga perlakuan yang diujikan yaitu: aplikasi kompos, aplikasi kompos+biopestisida, dan aplikasi kompos+bionematisida Netamax FP-Unila. Hasil penelitian ditemukan 8 genus nematoda parasit tumbuhan pada akar dan tanah tanaman guava kristal berproduksi, yaitu *Meloidogyne* sp., *Aphelenchus* sp., *Aphelenchoides* sp., *Hemicriconemoides* sp., *Radopholus* sp., *Tylenchus* sp., *Xiphinema* sp., dan *Aorolaimus* sp.. *Meloidogyne* sp. merupakan genus nematoda parasit tumbuhan yang ditemukan dengan populasi paling tinggi sedangkan nematoda parasit tumbuhan lainnya ditemukan dalam populasi yang sangat rendah. Aplikasi kompos+bionematisida Netamax FP-Unila efektif menurunkan populasi *Meloidogyne* sp., sedangkan populasi nematoda parasit tumbuhan lainnya yang ditemukan dalam akar tanaman guava kristal berproduksi di PG1 dan PG2 baik sebelum maupun setelah diberi perlakuan tidak berbeda nyata. Demikian pula populasi nematoda parasit tumbuhan lainnya yang ditemukan dalam tanah tanaman guava kristal berproduksi di PG1 dan PG2.

Kata kunci: bionematisida, guava kristal, *Meloidogyne*, nematoda parasit tumbuhan, *Purpureocillium lilacinum*.

ABSTRACT

EFFECTIVENESS OF BIONEMATICIDE NETAMAX-FP UNILA IN CONTROLLING PLANT PARASITIC NEMATODES IN CRYSTAL GUAVA

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The decline in the productive age of crystal guava (*Psidium guajava* L.) plants at PT GGF is suspected to be caused by plant-parasitic nematode attacks. One of the control measures that can be taken is biological control using bionematicides in the form of compost enriched with the fungus *Purpureocillium lilacinum*. This study aims to determine the effectiveness of the Netamax-FP Unila bionematicide in controlling the plant-parasitic nematode population in productive crystal guava plants at PT GGF. The research was conducted from September to June 2024 at PT GGF Central Lampung and the Plant Pest Science Laboratory, Faculty of Agriculture, University of Lampung. The experiment was designed using a Randomized Block Design (RBD) with three treatments and 20 replications. The three treatments tested were: compost application, compost + biopesticide application, and compost + Netamax FP-Unila bionematicide application. The results of the study found 8 genera of plant-parasitic nematodes in the roots and soil of productive crystal guava plants, namely *Meloidogyne* sp., *Aphelenchus* sp., *Aphelenchoides* sp., *Hemicriconemoides* sp., *Radopholus* sp., *Tylenchus* sp., *Xiphinema* sp., and *Aorolaimus* sp. *Meloidogyne* sp. was the genus of plant-parasitic nematode found with the highest population, while other plant-parasitic nematodes were found in very low populations. The application of compost + Netamax FP-Unila bionematicide effectively reduced the *Meloidogyne* sp. population, while the populations of other plant-parasitic nematodes found in the roots of productive crystal guava plants in PG1 and PG2, both before and after treatment, were not significantly different. Similarly, the populations of other plant-parasitic nematodes found in the soil of productive crystal guava plants in PG1 and PG2 were also not significantly different.

Keywords: bionematicide, crystal guava, *Meloidogyne*, plant parasitic nematodes, *Purpureocillium lilacinum*.