

ABSTRAK

PENGARUH IMPLEMENTASI NETAMAX-FP UNILA TERHADAP KERAGAMAN DAN KELIMPAHAN NEMATODA PADA GUAVA KRISTAL BERPRODUKSI DI PT GGF LAMPUNG TENGAH

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Jambu biji atau guava kristal (*Psidium guajava* L.) merupakan tanaman hortikultura yang buahnya banyak dikenal dan digemari masyarakat. Produktivitas guava kristal di Lampung tergolong cukup rendah dibandingkan dengan produktivitas Guava kristal di Jawa Tengah dan Jawa Timur. Salah satu faktor penyebab penurunan produksi jambu kristal adalah gangguan organisme pengganggu tumbuhan (OPT), salah satunya adalah nematoda parasit tumbuhan. Pengendalian OPT ini menggunakan bionematisida Netamax-FP Unila. Tujuan penelitian ini adalah untuk mengetahui pengaruh aplikasi Bionematisida Netamax-FP Unila terhadap komposisi komunitas nematoda serta pengaruhnya terhadap keragaman dan kelimpahan nematoda pada agroekosistem guava kristal berproduksi di PT Great Giant Food. Penelitian berlangsung bulan September 2023 - Maret 2024. Pengamatan nematoda dilakukan sebelum dan setelah aplikasi bionematisida. Nematoda diidentifikasi sampai tingkat genus. Keragaman nematoda diukur menggunakan jumlah genus, indeks Shannon-Wiener, indeks kekayaan jenis, indeks kemerataan jenis dan indeks Simpson's. Kelimpahan nematoda diukur dari total individu dan jumlah individu setiap genus. Hasil penelitian menunjukkan nematoda yang ditemukan meliputi 16 genus pada tanah dan 7 genus pada akar. Dari genus tersebut terdapat 3 kelompok peran nematoda meliputi nematoda parasit (*herbivore*), nematoda pemakan bakteri (*bacteriovore*) dan nematoda pemakan jamur (*fungivore*). Aplikasi Bionematisida Netamax-FP Unila plus kompos berpengaruh terhadap komposisi komunitas nematoda pada agroekosistem guava kristal. Aplikasi Bionematisida Netamax-FP Unila plus kompos tidak secara signifikan mempengaruhi keragaman dan kelimpahan nematoda. Aplikasi Bionematisida Netamax-FP Unila plus kompos yang dapat menurunkan kelimpahan nematoda parasit tumbuhan tidak berdampak buruk terhadap nematoda hidup bebas.

Kata kunci : indeks kekayaan jenis, indeks kemerataan jenis, indeks Shannon-Wiener, indeks Simpson's, nematoda

ABSTRACT

THE EFFECT OF NETAMAX-FP UNILA IMPLEMENTATION ON THE DIVERSITY AND ABUNDANCE OF NEMATODES IN CRYSTAL GUAVA PRODUCED AT PT GGF CENTRAL LAMPUNG

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Crystal guava (*Psidium guajava* L.) is a horticultural plant whose fruit is widely known and as a favorable fruit in Indonesia. Crystal guava productivity in Lampung is relatively low compared to crystal guava productivity in Central Java and East Java. One of the factors causing a decline in crystal guava production is plant pest attacking, one of which is plant-parasitic nematodes. Control of these plant pests uses the bionematicide Netamax-FP UNILA. The aim of this study was to determine the effect of the application of the Netamax-FP UNILA bionematicide on the composition of the nematode community and its effect on the diversity and abundance of nematodes in the crystal guava at PT Great Giant Food. The research is conducted from September 2023 - March 2024. Nematode observations were carried out before and after bionematicide application. Nematodes were identified to the genera taxonomic level. Nematode diversity was measured using the number of genera, functional group, Shannon-Wiener index, species richness index, species evenness index and Simpson's index. Nematode abundance was measured from the number of individuals of each genus. The research results showed that the nematodes found included 16 genera in soils and 7 genera in roots. From this genus there are 3 functional groups of nematode including parasitic nematodes (*herbivores*), bacterial feeder nematodes (*bacterivores*) and fungal feeder nematodes (*fungivores*). The application of the Netamax-FP UNILA bionematicide plus compost which can reduce the abundance of plant parasitic nematodes does not have a negative impact on free-living nematodes and nematodes diversity.

Keywords: nematodes, Shannon-Wiener index, Simpson's index, species evenness index, species richness index