

**KEANEKARAGAMAN CACING TANAH PADA LAHAN KELAPA
SAWIT (*Elaeis guineensis* Jacq.) DENGAN BERBAGAI
TINGKATAN UMUR DI NAGARI SIGUNTUR
KABUPATEN DHARMASRAYA**

SKRIPSI



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KEANEKARAGAMAN CACING TANAH PADA LAHAN KELAPA SAWIT (*Elaeis guineensis* Jacq.) DENGAN BERBAGAI TINGKATAN UMUR DI NAGARI SIGUNTUR KABUPATEN DHARMASRAYA

Abstrak

Keanekaragaman makrofauna tanah seperti cacing tanah berkaitan dengan kualitas tanah yang dapat menunjang pertumbuhan tanaman. Penelitian ini bertujuan untuk mengetahui keanekaragaman cacing tanah pada lahan kelapa sawit pada tingkatan usia tanaman yang berbeda, yaitu usia 3, 5 dan 10 tahun. Tahap awal penelitian adalah berupa pra-survei yang dilanjutkan dengan survei utama di lahan kelapa sawit. Penentuan titik sampel menggunakan metode purposive sampling dan pengambilan cacing tanah menggunakan metode hand sorting pada gawangan di setiap lahan sawit yang telah ditandai. Selanjutnya cacing tanah diidentifikasi untuk dikelompokkan berdasarkan kelas, famili sampai tingkat spesies. Data yang diperoleh dianalisis ragam berdasarkan Rancangan Acak Lengkap (RAK) dan dihitung beberapa variabel yang menjadi indikator keanekaragaman cacing tanah seperti Indeks Kekayaan Jenis Margalef, Indeks Keanekaragaman ShannonWiener, Indeks Keanekaragaman Jenis Simpson, dan Indeks Kemerataan Jenis (Evenness). Hasil sidik ragam menunjukkan bahwa perbedaan tingkatan umur tegakan tanaman kelapa sawit tidak memberikan pengaruh yang signifikan terhadap jumlah dan keanekaragaman cacing tanah yang diamati. Sedangkan hasil perhitungan indeks keanekaragaman menunjukkan bahwa keanekaragaman cacing tanah di lokasi penelitian berada pada kategori rendah hingga sedang. Berdasarkan hasil penelitian ditemukan 2 spesies cacing tanah yaitu *Pantoscolex corethrus* dan *Pheretima* sp. dengan kepadatan populasi yang bervariasi (1,3 - 4,5 individu/plot). Ketersediaan bahan organik pada lahan penelitian salah satunya dicerminkan dari nilai C-organik yang termasuk kriteria rendah, oleh karena itulah keberadaan cacing tanah yang ditemukan juga sedikit.

Kata Kunci : cacing tanah, hand sorting, indeks keanekaragaman, indeks kemerataan, umur tegakan sawit

DIVERSITY OF EARTHWORMS IN VARIOUS AGE LEVELS OF OIL PALM (*Elaeis guineensis* Jacq.) IN SIGUNTUR DHARMASRAYA DISTRICT

Abstract

The diversity of soil macrofauna such as earthworms is related to soil quality that supporting the plant growth. The objective of this study was to determine the diversity of earthworms in oil palm plantation at different plant age levels, namely 3, 5 and 10 years. The initial stage of this research was a pre-survey followed by a main survey on oil palm plantations. Sampling points was selected by purposive sampling and collecting earthworms was by hand sorting in the intersects in each marked of oil palm area. Furthermore, earthworms were identified to be grouped based on class, family to species level. The data obtained was analyzed of variance based on a Completely Randomized Design (CRD) and several variables were calculated which as indicators of earthworm diversity such as the Margalef Species Richness Index, Shannon-Wiener Diversity Index, Simpson Species Diversity Index, and Evenness Index. The results of the analysis of variance showed that the differences age of the oil palm not gave a significant effect on the number and diversity of earthworms observed. While the calculation results of the diversity index showed that the diversity of earthworms at the study site was in the low to moderate category. Based on the results of the study, 2 species of earthworms were found, namely *Pantoscolex corethrurus* and *Pheretima* sp. with varying population densities (1,3 – 4,5 individuals/plot). The availability of organic matter in the study site is reflected in the C-organic value that was a low criterion, therefore the presence of earthworms found was a few.

Keywords : earthworms, hand sorting, diversity index, evenness index, age of oil palm