

Komposisi Komunitas Cacing Tanah pada Lahan Pertanian Organik dan Anorganik (Studi Kasus Kajian Cacing Tanah Untuk Meningkatkan Kesuburan Tanah di Desa Raya Kecamatan Berastagi Kabupaten Karo)

Abstrak

Penelitian dilakukan di Desa Raya, Kecamatan Berastagi, Kabupaten Karo, Sumatera Utara dan di Laboratorium Sistematika Hewan Departemen Biologi, Universitas Sumatera Utara, Medan pada bulan Januari - April 2013. Penelitian dilakukan secara *purposive random sampling* dengan menggunakan metode kuadrat dan *hand sorting* serta menganalisis unsur hara (C-organik, N, P dan K) dengan kombinasi perlakuan yaitu tanah pertanian organik, OMCo (kontrol = tanpa cacing tanah), OMCa (inokulasi cacing tanah *Pheretima* sp.) dan OMCb (inokulasi cacing tanah *Pontoscolex corethrurus*). Pada perlakuan yang menggunakan tanah pertanian anorganik yaitu AnMCo (kontrol = tanpa cacing tanah), AnMCa (inokulasi cacing tanah *Pheretima* sp.) dan AnMCb (inokulasi cacing tanah *P. corethrurus*). Hasil penelitian lapangan ditemukan 1 spesies famili Glorocossidae (*P. corethrurus*) dan 3 spesies famili Megascolidae (*Amyntas* sp., *Megascolex* sp. dan *Pheretima* sp.). kepadatan cacing tanah pada pertanian organik (128,000 ind/m²) dan anorganik (73,600 ind/m²). Ada perbedaan komposisi komunitas cacing tanah pada lahan pertanian organik (*Pheretima* sp. 50,833%, *P. corethrurus* 40,000%, *Amyntas* sp. 7,500%, *Megascolex* sp. 1,667%) dan anorganik (*P. corethrurus* 49,275%, *Pheretima* sp. 46,377%, *Amyntas* sp. 4,384%). *P. corethrurus* dan *Pheretima* sp. merupakan jenis cacing tanah yang karakteristik pada lahan pertanian organik dan anorganik. Hasil analisis unsur hara tanah menunjukkan ada peningkatan unsur C, N dan K bila dibandingkan dengan hasil analisis unsur hara pada areal pertanian organik dan anorganik.

Kata kunci: anorganik, cacing tanah, kabupaten karo, komunitas, organik.

**Community composition Earthworm on Agricultural Land Organic and inorganic
(Case Study: Study Earthworm to Improve Soil Fertility in the Raya village,
Berastagi Sub District, Karo District)**

Abstract

*The study had been done in the Raya village, Berastagi Sub District, Karo District, North Sumatra and Animal Systematics Laboratory Department Biology, of North Sumatra University, Medan in January to April 2013. The study conducted by purposive random sampling using the method of least squares and hand sorting and then analyzing nutrients (organic C, N, P and K) with a combination of treatments that organic farms OMCo (control = no earthworms), OMCa (inoculation *Pheretima* sp. earthworm) and OMCb (inoculation *Pontoscolex corethrurus* earthworm). On treatment using inorganic agricultural land that is AnMCo (control = no earthworms), AnMCA (inoculation of *Pheretima* sp. earthworms) And AnMCb (inoculation *P. corethrurus* earthworm). The results of field research found 1 family Glocossicidae species (*P. corethrurus*) and 3 species of family Megascolidae (*Amyntas* sp., *Megascolex* sp., And *Pheretima* sp.). Density of earthworms in organic farming (128,000 ind/m²) and inorganic (73,600 ind/m²). There are differences in community composition of earthworms on organic farms (*Pheretima* sp. 50,833%, *P. corethrurus* 40,000%, *Amyntas* sp. 7,500%, *Megascolex* sp. 1,667%) and inorganic (*P. corethrurus* 49,275%, *Pheretima* sp. 46,377%, *Amyntas* sp. 4,348%). *P. corethrurus* and *Pheretima* sp. is a characteristic species of earthworms in organic and inorganic agricultural land. Soil nutrient analysis results showed no increase in the elements C, N and K when compared with the results of the nutrient analysis of organic and inorganic agricultural areas.*

Keywords: inorganic, earthworms, karo district, community, organic.