



CACING TANAH SEBAGAI INDIKATOR KUALITAS TANAH PADA LAHAN PASCA ERUPSI 2010 DI LERENG SELATAN MERAPI

Intisari

Penelitian ini bertujuan untuk mengetahui kepadatan dan jenis cacing tanah sebagai indikator kualitas tanah pada lahan pasca erupsi 2010 di lereng selatan Merapi. Pengambilan cacing tanah dan sampel tanah dilakukan di bawah tegakan tanaman Bambu, Salak, Sengon, Kopi, *A.mangium*, dan *A.decurrens*. Lokasi penelitian berada pada ketinggian 386-1187 m dpl. Perhitungan indeks kualitas tanah mengikuti kriteria *Mausbach and Seybold* (1998) yang dimodifikasi menggunakan minimum data set (MDS). Hasil penelitian menunjukkan bahwa ditemukan tiga famili cacing tanah yaitu Megascolecidae, Acanthodrilidae, dan Lumbricidae. Famili Megascolecidae diwakili oleh genus *Pheretima* terdiri dari spesies *Pheretima hamayana* dan *Pheretima californica*. Famili Acanthodrilidae diwakili genus *Eudrillus*, spesies yang ditemukan *Eudrillus eugeniae*. Sedangkan famili lumbricidae diwakili genus *Eiseniella* dari spesies *Eiseniella tetraeda*. Kepadatan cacing tanah pada lahan di bawah tegakan tanaman Kopi (105,33 ind.m⁻²) > Salak (92,59 ind.m⁻²) > Sengon (66,67 ind.m⁻²) > *A.decurrens* ≈ Bambu (40,74 ind.m⁻²) > *A. mangium* (37,04 ind.m⁻²). Indeks kualitas tanah di lereng selatan Merapi berkisar antara rendah sampai baik dimana pada tanah di bawah tegakan tanaman Bambu (0,74) > Salak (0,67) > Kopi (0,69) > *A.decurrens* (0,51) > *A.mangium* (0,39) > Sengon (0,36). Korelasi antara populasi cacing tanah dengan indeks kualitas tanah pada lahan pasca erupsi 2010 di lereng selatan Merapi menunjukkan korelasi lemah dengan $r = 0,406$.

Kata kunci: Indek kualitas tanah, Cacing tanah, Merapi



EARTHWORMS AS SOIL QUALITY INDICATOR IN LAND POST ERUPTI 2010 IN SOUTH MERAPI

Abstract

This study aims to determine the density and type of earthworms as an indicator of soil quality on post-eruption land 2010 on the southern slopes of Merapi. Taking earthworm and soil sample is done under stand of Bamboo, Salak, Sengon, Coffee, *A.mangium*, and *A.decurrens* plants. The research location is located at an altitude of 386-1187 m dpl. The calculation of soil quality index follows Mausbach and Seybold (1998) criteria modified using minimum data set (MDS). The results showed that three families of the earthworms found were Megascolecidae, Acanthodrilidae, and Lumbricidae. Family Megascolecidae represented by the genus *Pheretima* consists of species *Pheretima hamayana* and *Pheretima californica*. The family of Acanthodrilidae is represented by the genus *Eudrillus*, a species found by *Eudrillus eugeniae*. While the family lumbricidae represented the genus *Eiseniella* of *Eiseniella tetraeda* species. Density of earthworms on land under stand of Coffee plant (105,33 ind.m⁻²)> Salak (92,59 ind.m⁻²)> Sengon (66,67 ind.m⁻²)> *A.decurrens* ≈ Bamboo (40,74 ind.m⁻²)> *A. mangium* (37,04 ind.m⁻²). The soil quality index on the southern slopes of Merapi ranges from low to good where in the soil below the stands of Bamboo plants (0.74)> Salak (0.69)> *Coffee* (0.67)> *A.decurrens* (0,51)> *A.mangium* (0.39)> Sengon (0.36). The correlation between soil worm populations and the soil quality index on post eruption 2010 on the southern slopes of Merapi showed a weak correlation with $r = 0.406$

Keywords: Soil quality index, Earthworm, Merapi