Intisari

Indeks Kualitas Tanah merupakan suatu cara untuk menentukan kesehatan dan kualitas suatu lahan. Penilaian Indeks Kualitas Tanah dilakukan di lahan yang intensif seperti lahan pertanian hortikultura di Dusun Dukuh, Sumberejo, Ngablak, Magelang. Penelitian ini dilakukan untuk mengetahui Indeks Kualitas Tanah dan kelimpahan nematoda pada 10 lahan dengan vegetasi yang berbeda di Tanah Andisol. Lahan yang digunakan adalah lahan dengan sistem pertanian organik, anorganik, dan lahan kontrol (lahan non budidaya). Penilaian Indeks Kualitas Tanah secara skoring dilakukan dengan 3 tahapan yaitu pemilihan indikator, interpretasi indikator, dan integrasi yang didasarkan pada *Minimum Data Set* (MDS). Terdapat 10 parameter sifat tanah dengan skor tertinggi 5 dan skor terendah 1. Parameter sifat tanah yang diuji berupa sifat fisika (tekstur, berat volume, dan porositas); sifat kimia (pH, kapasitas pertukaran kation, Nitrogen total, P tersedia, K tersedia, dan Carbon organik); serta sifat biologi (respirasi tanah). Penilaian kelimpahan nematoda dilakukan dengan metode *Whitehead Tray Technique*. Hasil menunjukkan bahwa Indeks Kualitas Tanah terbaik ditemukan pada tumpangsari cabai keriting dan kubis di lahan organik. Lahan organik maupun anorganik tergolong ke dalam harkat Indeks Kualitas Tanah yang baik sementara lahan kontrol tergolong ke dalam harkat sedang. Parameter sifat tanah yang paling kuat mempengaruhi Indeks Kualitas Tanah adalah P tersedia dan K tersedia. Kelimpahan nematoda non parasit dan parasit tertinggi berada pada monokultur cabai rawit di lahan anorganik. Perbaikan lahan dapat dilakukan dengan memperhatikan jenis tanaman yang ditumpangsarikan.

Kata kunci: indeks kualitas tanah, kelimpahan nematoda, vegetasi

Abstract

Soil Quality Index is a way to determine the health and quality of a land. Soil Quality Index assessment is conducted on intensive land such as horticultural farmland in Dukuh, Sumberejo, Ngablak, Magelang. This study was conducted to determine the Soil Quality Index and nematode abundance on 10 fields with different vegetation in Andisol Soil. The lands used were organic, inorganic, and control (non-cultivated land). The scoring of the Soil Quality Index was carried out in three stages: indicator selection, indicator interpretation, and integration based on the Minimum Data Set (MDS). There were 10 soil property parameters with the highest score of 5 and the lowest score of 1. The soil property parameters tested were physical properties (texture, volume weight, and porosity); chemical properties (pH, cation exchange capacity, total nitrogen, available P, available K, and organic carbon); and biological properties (soil respiration). Assessment of nematode abundance was conducted using the Whitehead Tray Technique. The results showed that the best Soil Quality Index was found in the intercropping of curly chili and cabbage on organic land. Both organic and inorganic land are categorized as good Soil Quality Index while the control land is categorized as moderate. The soil properties parameters that most strongly influenced the Soil Quality Index were available P and available K. The highest abundance of non-parasitic and parasitic nematodes was in bird's eye monoculture on inorganic land. Land improvement can be done by paying attention to the type of crop that is intercropped.

Keywords: soil quality index, nematode abundance, vegetation