POPULASI DAN KEANEKARAGAMAN MAKROFAUNA TANAH GAMBUT AKIBAT PERUBAHAN PENGGUNAAN LAHAN DI NAGARI KETAPING KABUPATEN PADANG PARIAMAN

SKRIPSI

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Abstrak

Penelitian populasi dan keanekaragaman makrofauna tanah gambut yang diakibatkan perubahan penggunaan lahan di Nagari Kataping Kabupaten Padang Pariaman mengalami perubahan menjadi lahan pertanian berakibat pada perubahan ekosistem. Tujuan penelitian adalah mengetahui populasi dan keanekaragaman makrofauna tanah di lahan gambut pada perubahan penggunaan lahan Penelitian ini dilakukan dari bulan September 2019 hingga Januari 2020. Penelitian dilakukan dengan metode survei. Pengambilan sampel dilakukan secara *purposive sampling* pada penggunaan lahan berbeda (gambut alami, sawah, jagung, dan kelapa sawit) kedalaman 0-20 cm dan 20-40 cm. pengamatan makrofauna tanah dilakukan di lapangan dan analisis tanah di laboratorium. Parameter pengamatan terdiri dari indeks keragaman makrofauna, respirasi makrofauna tanah, kematangan gambut, berat volume, kadar air, C-organik, N-total dan pH (H_2O). Hasil penelitian yaitu populasi makrofauna tanah tertinggi pada lahan jagung berjumlah 19 ekor dan terendah pada lahan sawah berjumlah 0 sedangkan keanekaragaman makrofauna tanah tertinggi dan terendah pada lahan sawah, indeks keragaman (H') teringgi 0,89 kedalaman 0-20 cm dan indeks keragaman (H') terendah 0 kedalaman 20-40 cm. Dari hasil dapat disimpulkan bahwa perubahan penggunaan lahan dari gambut alami menjadi penggunaan lahan lainnya mempengaruhi populasi dan keanekaragaman makrofauna tanah.

Kata Kunci: Populasi, Keanekaragaman, makrofauna, penggunaan lahan

POPULATION AND MACROFAUNA OF PEAT SOIL DUE TO LAND USE CHANGE IN NAGARI KETAPING, PADANG PARIAMAN DISTRICT

Abstract

Land use change has caused changing in ecosystem which affects the population and the diversity of soil organisms. A research on the population and diversity macrofauna of peat soil due to changes in land use was conducted in Nagari Kataping, Padang Pariaman Regency from September 2019 to January 2020. The objective of the research was to determine the population and diversity of soil macrofauna in peat soil after land use change. The study was conducted using a survey method. Soil sampling method employed was *purposive sampling* which was based on different types of land use (natural peat, rice field, maize, and oil palm). At each land use, soil was sampled at of 0-20 cm and 20-40 cm soil depth. Soil macrofauna observations were carried out in the field and soil analysis in the laboratory. Observation parameters consisted of macrofauna (diversity index, soil respiration) and soil (peat maturity, bulk density, moisture content, organic C, total N, and pH H_2O). The results showed that the highest soil macrofauna population was 19 which was found under maize land use and the lowest one was 0 which was in rice fields. The highest and the lowest soil macrofauna diversity was found in paddy fields, the highest diversity index (H') was 0.89 (at 0-20 cm depth) and the lowest was 0 (at 20-40 cm depth). From the results it could be concluded that land use change from natural peat to other types of land use affected the population and diversity of the soil macrofauna.

Keywords: diversity, macrofauna, land use, population