Evaluasi Kesuburan Kimia Tanah dan Karakteristik Morfometri Pohon Pada Perkebunan Durian di Desa
Banjaroyo, Kulon Progo
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INTISARI

Penelitian ini bertujuan untuk mengetahui tingkat dan distribusi kesuburan kimia tanah, mengukur morfometri pohon, dan mengevaluasi praktik pengelolaan lahan perkebunan durian di Desa Banjaroyo, Kecamatan Kalibawang, Kabupaten Kulon Progo. Metode yang dipakai adalah *Soil Fertility Index*, dimana parameter tanah yang diuji adalah pH, kadar lengas tanah, nitrogen total, fosfor tersedia, kalium tersedia, kalsium tersedia, magnesium tersedia, karbon organik, kapasitas pertukaran kation, kejenuhan aluminium, dan tekstur tanah. Selain itu, karakterisasi morfometri pohon durian meliputi tinggi pohon, luas kanopi, dan diameter batang. Hasil menunjukkan bahwa nilai *Soil Fertility Index* tertinggi adalah 260 (kategori tinggi) dan nilai *Soil Fertility Index* paling rendah adalah 165 (kategori sedang). Parameter sifat tanah berkorelasi sangat lemah terhadap diameter batang (R=0,14) dan luas kanopi (R=0,1), sementara sifat tanah dengan tinggi tanaman berkorelasi negatif sangat lemah (R=-0,15). Distribusi unsur hara dipengaruhi secara signifikan oleh faktor kedalaman tanah, namun tidak dipengaruhi secara signifikan oleh posisi lereng. Data pertumbuhan vegetatif tanaman durian tersebar relatif acak, dengan rentang tinggi tanaman 6,38-11,37 m, luas kanopi 12,09-77,09 m, dan diameter batang 12,17-34,71 cm. Sementara itu, penerapan terasering dinilai efektif menekan translokasi unsur hara ke lereng bawah.

Kata kunci : *Soil fertility index*, kedalaman tanah, lereng, morfometri.

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ABSTRACT

This study aims to determine the level and distribution of soil chemical fertility, measure tree morphometry, and evaluate land management practices in durian in Banjaroyo Village, Kalibawang District, Kulon Progo Regency. Soil Fertility Index method was employed, with tested soil parameters including pH, soil moisture content, total nitrogen, available phosphorus, available potassium, available calcium, available magnesium, soil organic carbon, cation exchange capacity, aluminium saturation, and soil texture. Additionally, the morphometric characterization of durian trees included tree height, canopy area, and trunk diameter. The results showed that the highest Soil Fertility Index value was 260 (high category) and the lowest was 165 (moderate category). Soil property parameters had a very weak correlation with trunk diameter (R = 0,14) and canopy area (*R* = 0,1), while soil properties had a very weak negative correlation with plant height (*R* = -0,15). The distribution of nutrients was significantly influenced by soil depth, but not significantly influenced by slope position. Growth data for durian vegetative plants were distributed relatively randomly, with a plant height range of 6,38-11,37 m, canopy area of 12,09-77,09 m^2, and trunk diameter of 12,17-34,71 cm. Meanwhile, the implementation of terracing was considered effective in suppressing nutrient translocation to the lower slopes.

Keywords : Soil fertility index, soil depth , slope, morphometry.