

KAJIAN MORFOLOGI DAN SIFAT FISIK TANAH DI BAWAH TEGAKAN TANAMAN CENGKEH (*Syzygium aromaticum L*) DI KELURAHAN RUA KECAMATAN PULAU TERNATE

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui karakteristik morfologi dan sifat fisik tanah di bawah tegakan tanaman cengkeh (*Syzygium aromaticum L*) di Kelurahan Rua Kecamatan Pulau Ternate. Penelitian ini menggunakan pendekatan analitik dimana penentuan lokasi penelitian didasarkan pada hasil overlay peta topografi dan peta penggunaan lahan. Observasi tanah di Lapangan menggunakan metode transek dengan jumlah titik pengamatan sebanyak tiga profil dengan pengkodean profil SR-01, SR-02 dan SR-03. Pengamatan morfologi tanah pada masing-masing profil tanah meliputi horizon/lapisan, warna tanah, struktur tanah, konsistensi tanah dan perakaran. Analisis sifat fisik tanah mencakup tekstur tanah, berat volume, berat jenis, porositas, permeabilitas, kadar air dan nilai COLE. Hasil penelitian menunjukkan bahwa horison tanah pada profil SR-01 terdiri dari horison A, AB, Bw dan Bc, profil SR-02 horison terdiri dari horizon A1, A2, BA, Bw dan BC, profil SR-03 terdiri dari horizon A, AE, Bw dan BC. Warna tanah pada profil SR-01 berwarna abu-abu sangat gelap (7,5YR3/1) sampai coklat tua (7,5YR3/4). Pada profil SR-02 berwarna coklat sangat gelap (10YR2/2) sampai coklat gelap kekuningan (10YR3/4). Sementara warna tanah pada profil SR-03 berwarna coklat gelap (10YR3/3) sampai coklat gelap kekuningan (10YR3/6). Struktur tanah pada lapisan atas umumnya remah dan lapisan bawah memiliki struktur gumpal (kubus). Konsistensi tanah gembur sampai agak teguh (lembab) dan agak lekat sampai lekat (basah). Perakaran halus tersebar baik pada lapisan atas sampai lapisan bawah, sementara perakaran kasar terkonsentrasi pada lapisan atas. Sifat fisik tanah hasil analisis diperoleh kelas tekstur tanah rata-rata didominasi lempung berliat, bahan organik umumnya rendah (1,63 %), kadar air tanah rata-rata antara 57,9 % sampai 44,6 %, berat volume tanah sedang (1,17 g/cm³) sampai tinggi (1,37 g/cm³), berat jenis partikel tanah (2,38 g/cm³), porositas tanah sedang (47,3%), permeabilitas sedang (4,08 cm/jam) dan COLE sedang (0,09).

Kata Kunci: Morfologi Tanah, Sifat Fisik Tanah, Tegakan Tanaman Cengkeh.

**STUDY OF SOIL MORPHOLOGY AND PHYSICAL PROPERTIES
UNDER CLOVE (*Syzygium aromaticum L*) STANDS IN THE KELURAHAN
RUA DISTRICT, TERNATE ISLAND**

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ABSTRACT

This study aims to determine the morphological characteristics and physical properties of the soil under a clove plant (stand *Syzygium aromaticum L*) in Rua Village, Ternate Island District. This study uses an analytical approach where the determination of the research location is based on the results of overlaying topographic maps and land use maps. Observation of soil in the field using the transect method with a number of observation points as many as three profiles with profile coding SR-01, SR-02 and SR-03. Observation of soil morphology on each soil profile includes horizon/layer, soil color, soil structure, soil consistency and roots. Analysis of soil physical properties includes soil texture, volume weight, specific gravity, porosity, permeability, water content and COLE value. The results showed that the soil horizon in the SR-01 profile consists of horizons A, AB, Bw and Bc, the SR-02 horizon profile consists of horizons A1, A2, BA, Bw and BC, the SR-03 profile consists of horizons A, AE, Bw and BC. Soil color in profile SR-01 is very dark gray (7.5YR3/1) to dark brown (7.5YR3/4). The SR-02 profile is very dark brown (10YR2/2) to dark yellowish brown (10YR3/4). Meanwhile, the soil color in the SR-03 profile is dark brown (10YR3/3) to dark yellowish brown (10YR3/6). The soil structure in the top layer is generally crumb and the bottom layer has a lumpy structure (cuboid). The consistency of the soil is loose to slightly firm (moist) and slightly sticky to sticky (wet). Fine roots are well distributed in the top layer to the bottom layer, while coarse roots are concentrated in the top layer. Soil physical properties analysis results obtained that the average soil texture class is dominated by loamy clay, organic matter is generally low (1.63%), the average soil water content is between 57.9% to 44.6%, the weight of the soil volume is medium (1,17 g/cm³) to high (1,37 g/cm³), density of soil particles (2,38 g/cm³), medium soil porosity (47.3%), medium permeability (4.08 cm /hour) and medium COLE (0.09).

Keywords: Soil Morphology, Soil Physical Properties, Clove Plant Stands.