

**CHARACTERISTICS OF SOIL CONSISTENCY OF VERTISOL ON
DIFFERENT LAND USES IN BANDUNGROJO VILLAGE NGAWEN
DISTRICT BLORA REGENCY**

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ABSTRACT

Vertisol has constraints in the level of soil tillage, which is influenced by the value of the Plasticity Index and Tilth Range. The purpose of this study is (1) Examine the factors that affect soil consistency characteristics, (2) Analyze Vertisol soil consistency parameters in different land uses, and (3) Determine the level of Vertisol soil processing at the research site. The study was conducted in Bandungrojo Village, Ngawen District, Blora Regency, using a survey method by purposive sampling in seven different locations, including irrigated rice fields fed with manure, irrigated fields without manure, rainfed rice fields, moors fed with manure, moors without manure, untreated teak gardens, and mixed gardens with simple tillage. The parameters analyzed include soil texture, soil organic matter content, and Atterberg numbers, which include Liquid Limit, Sticky Limit, Plastic Limit, Color Change Limit, Plasticity Index, Tilth Range, Maximum Water Supply, Surplus, and Soil Tilth Level. Data analysis was performed using a simple linear regression analysis of soil texture and soil organic matter with soil consistency. The results showed that the consistency of Vertisol soil at the study site was diverse. Clay and organic matter contents cause the values of liquid limit, maximum water supply, and soil plasticity index to be high. sand content causes the values of sticky limit, plastic limit, and color change limit to be low. Rainfed rice fields and untreated gardens have poor soil tilth levels, irrigated fields fed with manure, mixed gardens with simple tillage, and moors fed with manure have medium soil tilth levels, irrigated fields without manure have moderate good soil tilth levels, and moors without manure have good soil tilth levels.

Keywords: Vertisol, Consistency, Soil Tilth Levels