

ABSTRACT

The nutrients N, P and Mn are components of plants and play an active role in the metabolic process so that their role cannot be replaced by other nutrients. Central Aceh Regency has various types of soil, namely Aluvial, Grumosol, Andosol, Mediteran, Podsolic, Brown Podsolic, and Red Yellow Podsolic. The differences in soil types will affect the levels of N, P, and Mn nutrients in the soil because the soil forming factors and parent materials are different. This study aims to determine the distribution of Total-N, Available-P, and Exchangeable-Mn levels across different soil types in Central Aceh Regency. This research used a survey method consisting of four stages, namely the preparation stage, preliminary survey, main survey, data analysis and presentation of results. The N, P and Mn content parameters analyzed were Total-N using the Kjeldahl method, Available-P using the Bray I method, and Exchangeable-Mn using the DTPA Extraction method. The results showed that the N-Total content in various types of soil was in the very low to medium range. The highest N-Total value namely 0,42% was found in 0-20 cm Andosol and the lowest value namely 0,02%, was found in 20-40 cm Mediteran. The available P value is classified as very low to very high. The highest value namely 116.55 ppm, was found in 0-20 cm Aluvial and the lowest value namely 2.03 ppm was found in the 20-40 cm Podsolic soil. The highest value of Exchangeable-Mn namely 92.57 ppm was found in 0-20 cm Red Yellow Podsolic and the lowest value namely 1.68 ppm, was found in 20-40 cm Andosol. The nutrient content is influenced by soil type, texture, organic matter content, soil pH, and environmental factors such as climate and land use.

Keyword : upland, soil characteristics, soil chemical properties, nutrients,.