

ABSTRACT

Soil fertility is the ability of a soil to provide nutrients in sufficient quantities to support plant growth. There is a decrease in land area and production of potato crops in Central Aceh district each year. The purpose of the study was to determine the level of soil fertility in potato crop land with elevation and slope elements in Central Aceh district. This study uses 4 methods, namely preparation, preliminary, main survey and data analysis and presentation of results. samples taken on potato crop land are in four sample points that have been determined, the position of soil sampling is determined based on differences in elevation, namely 1100-1300 m above sea level, 1300-1500 m above sea level, 1500-1700 m above sea level, and 1700-1900 m above sea level. at this stage, at each different elevation soil samples are taken on each slope, namely 3-8% and 8-15%. Parameters observed were Cation Exchange Capacity (CEC), Base Saturation (KB), P₂O₅, K₂O, C-Organic. The results showed that the criteria for soil chemical properties had varying values. such as the value of cation exchange capacity (CEC) ranging from 12.20-23.80 me/100g with low - medium criteria, base saturation (KB) ranging from 5.46-18.94% with very low criteria, P₂O₅ ranging from 2.17-14.92 mg/100g with very low - low criteria, K₂O ranging from 25.42-90.97 mg/100g with medium - very high criteria, C-Organic ranging from 2.59-5.49% with medium - very high criteria. Based on the results of the analysis of soil chemical properties in the study, it shows that the level of soil fertility in potato fields with elevations of 1100-1900 m above sea level with a slope of 3-15% has a low soil fertility status.

Keywords: C-Organic, soil fertility, altitude, Slope, Soil Chemistry