

THE STATUS OF PRIMARY MACRO-NUTRIENTS AND SOME MICRO-NUTRIENTS IN THE KARST MICRO TOPOSEQUENCE OF KARANGASEM GUNUNGKIDUL

By : Elysama Tamba

Supervised by : Djoko Mulyanto

ABSTRACT

Karst micro toposequences (summit, slope, foot, and dolin areas) have different physical and morphological conditions that affect the status of macro and micro nutrients. This study aims to assess the status of primary macro-nutrients and some micro-nutrients. This research used a survey method by determining sampling points in the processing layer with a depth of 0-20 cm. Each section was taken 3 samples as replicates to be analyzed in the laboratory. The analysis included, Soil acidity, C-Organic, Soil texture, Redox potential, N,P,K Potential and Available, Fe,Mn,Zn Available. The results showed that the soil texture in the summit area and the slope of the debuan geluh, while in the foot area and dolin had a loam texture. The pH value of the soil in the summit area is neutral (6.8), the slope area is slightly basic (7.5), while the foot of the slope is neutral (7.12) and the dolin area is acidic (5.25). The summit and slope areas have a fairly high C-Organic content (3.25 %), while the foot and dolin areas have a lower percentage (1 - 1.5 %). Available N, P, K and microelement concentrations (Fe, Mn, Zn) in the doline area had the highest values compared to the others. However, the levels of total N and potential K in the area have the lowest value. Potential redox values are highest in the peak area. The redox values showed a unique pattern of being highest in the peak area, decreasing in the slope and foot area, but increasing again in the dolin area.

Keywords : Macro nutrients, micro nutrients, karangasem, micro toposequence