NUTRIENT STATUS OF N, P AND K ON IRRIGATED RICE FIELDS IN PRAMBANAN KAPANEWON, SLEMAN DISTRICT, SPECIAL REGION OF YOGYAKARTA

By : Widya Wiba Wati

Supervised by : Djoko Mulyanto and Ali Munawar

ABSTRACT

Prambanan Kapanewon, Sleman District, Yogyakarta has varying levels of rice productivity, from medium to high productivity. The difference in productivity levels is due to nutrient availability, fertilization, and land management. This study aims to determine the chemical properties of soil, especially elements of N, P, and K in soils that have different levels of rice productivity. The methods used in this study are survey methods and laboratory analysis. Purposive sampling was carried out based on the productivity of rice fields with medium and high status. Based on the level of productivity of rice fields, there are 18 sample points which are composite into 7 samples and analyzed in the laboratory. The main parameters are N-total, P-potential, K-potential, N-available, P-available, K-available, C-organic, CEC and soil pH. The results showed that several chemical properties in areas of high productivity level had an average nutrient status of N-total of 0.17% (Low), P-potential 56.5 mg / 100g (High), K-potential 17 mg / 100g (Low), C-organic by 2.75% (Medium), CEC 11.52 cmol (+) kg-1 (Low). Medium productivity areas have an average N-total nutrient of 0.23% (Medium), P-potential 38.33 mg/100g (Medium), K-potential 72mg/100g (Very High), C-organic 3.23% (High), CEC 33.06 cmol(+)kg^{-1} (High). Soil pH at both study sites was 6.1 (Soil Adicity). High productivity areas have low to medium soil fertility, while medium productivity areas have medium to high soil fertility. It is suspected that land management factors are the cause of differences in productivity levels.

Keywords: *irrigated rice fields, nutrient status of N, P and K, productivity, ,*