SPATIAL DISTRIBUTION OF NITROGEN LEVELS USED ORDINARY KRIGING METHOD IN RICE LAND SUMBERAGUNG SUBDISTRICT DISTRICT MOYUDAN SLEMAN REGENCY

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ABSTRACT

The spatial distribution map of nitrogen nutrient levels can describe the availability of nitrogen nutrient levels in the soil. The spatial interpolation method can help produce distribution data over a large area so that we can know the distribution of N-available and N-total over the entire land with several sampling points. This research was conducted on rice fields in parts of Sumberagung Subdistrict, District Moyudan, Sleman Regency. This research aims to determine the spatial distribution of nitrogen nutrient levels and identify factors that influence nitrogen nutrient levels in rice fields. The method used is the survey method and the Spatial Interpolation Ordinary Kriging Method. Soil sampling was carried out using a grid technique, by taking composite soil samples from 42 sample points each 250 meters apart in a rice field area of 291.1 hektares. The N-total results in the research area were 0.33 – 0.51% and N-available was 0.10 – 0.49%. The high spatial distribution of N-total and N-available nutrients is in areas close to chicken cultivation. Differences in phonska fertilization influence the spatial distribution of N-available. pH has a weak correlation with N-total and very weak with N-available. pH has an influence of 7.26% on N-total and 3.37% on N-available. Eh has a weak correlation with N-total and a strong correlation with N-available N. Eh influences 8.15% of N-total and 53.03% of N-available. Water height has a weak correlation with N-total and N-available. Water height affects N-total by 4.47% and N-available by 12.73%.

Key words: kriging method, nitrogen nutrient distribution, spatial interpolation