# SOIL FERTILITY STATUS OF CONVERTED PROTECTED RICE FIELDS IN KAPANEWON SEYEGAN, SLEMAN DISTRICT, YOGYAKARTA SPECIAL REGION

**By: Alvin Dwi Hermansyah**

**Supervised by: Partoyo and Sari Virgawati**

## ABSTRACT

The conversion of rice fields in Seyegan is suspected to occur due to the low soil fertility. This study was conducted to analyze the extent and distribution of conversion of rice fields associated with soil fertility status and its effect on rice production in the period 2015-2022. This study used a survey method, purposive determination of sample points on rice fields representing the converted rice fields, and soil samples was taken compositely. Data analysis used spatial analysis, graphs, and laboratory tests. The parameters tested were pH, CEC, Base Saturation, potential $P_2O_5$, potential $K_2O$, and C-organic. Determination of soil fertility status was based on The Technical Guidelines For Soil Fertility Evaluation PPT 1995. The results showed that the area of rice fields in Seyegan District in the period 2015-2022 decreased by 55,26 ha (3,76%) with an average annual decrease of 0,54% and caused a decrease in rice production by 9,969 tons. The status of soil fertility in rice fields that have been converted into settlements was very low to medium, rice fields into moorland and chicken coops were medium, rice fields into shrubs and factories were low. The limiting factors of soil fertility were CEC and C-organic.

***Keywords:*** *Land use change, rice production, soil fertility status.*