

**ASSESSMENT OF THE FERTILITY STATUS OF PADDY FIELDS WITH
DIFFERENT CROP ROTATION IN MEGER VILLAGE, CEPER
SUBDISTRICT, KLATEN DISTRICT**

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ABSTRACT

Farmers in Meger Village mostly apply crop rotations of paddy-paddy- paddy and paddy-corn-paddy. Different crop rotations cause differences in soil management which can result in differences in the properties of paddy fields. The aim of the research was to assess the fertility status of paddy fields and identify factors limiting the fertility of paddy fields with paddy-paddy- paddy and rice-corn-rice crop rotations in Meger Village. The research method uses a survey method. Determination of sampling points uses a purposive sampling method, namely the soil samples taken are determined first based on the crop rotation applied. Determination of soil fertility status based on technical instructions for soil fertility evaluation of the Soil Research Center in 1995. The results of analysis of soil chemical properties using paddy-paddy-paddy crop rotation obtained an average KPK value of 1.74 me/100g (very low), KB value of 36.17 % (medium), P₂O₅ content 60 mg/100g (high), K₂O content 159.4 mg/100g (very high), C-Organic value 1.81 % (low), N-Total value 0.122 % (low), and a pH value of 6.6 (neutral). Meanwhile, the results of the analysis of soil chemical properties with paddy-corn-paddy crop rotation obtained an average KPK value of 1.225 me/100g (very low), KB value 35.63% (medium), P₂O₅ content 91 mg/100g (very high) , K₂O content 558.6 mg/100g (very high), C-Organic value 1.305% (very low), N-Total value 0.113% (low), and pH value 6.55 (neutral). Based on the results of the analysis of soil chemical properties, it shows that the soil fertility status in the paddy-paddy-paddy and paddy-corn-paddy crop rotations is classified as very low. The limiting factors for soil fertility status are the Cation Exchange Capacity (KPK) and soil C-Organic which are very low.

Keywords: soil fertility status, limiting factors, crop rotation.