

**EVALUASI STATUS KESUBURAN KIMIA TANAH PADA LAHAN
SAWAH DENGAN SISTEM BUDIDAYA PADI SECARA ORGANIK DAN
SEMI ORGANIK DI DESA GEMPOL, KECAMATAN KARANGANOM,
KABUPATEN KLATEN**

Oleh : Azzahra Jasmin Sejati
Dibimbing Oleh : R. Agus Widodo

ABSTRAK

Perbedaan sistem budidaya padi secara organik dan semi organik yang ada di Desa Gempol dapat mempengaruhi kesuburan kimia tanah. Penelitian ini bertujuan untuk menganalisis status kesuburan tanah pada lahan sawah. Penelitian ini menggunakan metode *survey* untuk mengetahui kondisi lokasi dan metode *purposive* yaitu memilih lokasi yang mempunyai sistem budidaya padi secara organik dan semi organik. Penentuan titik sampel ditentukan secara *random sampling* berdasarkan luasan lahan. Penilaian status kesuburan tanah menggunakan metode *matching* dengan petunjuk teknis evaluasi kesuburan tanah Pusat Penelitian Tanah Bogor 1995 yaitu berdasarkan kombinasi sifat kimia tanah. Hasil penelitian menunjukkan bahwa tanah pada lahan sawah dengan sistem budidaya padi secara semi organik menunjukkan rata-rata nilai pH 6,60 (netral), kapasitas pertukaran kation (KPK) 28,22 me/100g (tinggi), kejenuhan basa 69,5% (tinggi), kadar P_2O_5 ekstrak HCl 25% 23,41 mg/100g (sedang), kadar K_2O ekstrak HCl 25% 20,26 mg/100g (rendah), dan kadar C-Organik 1,66% (rendah). Sementara itu, karakteristik sifat kimia tanah pada lahan sawah dengan sistem budidaya padi secara organik menunjukkan rata-rata nilai pH 6,65 (netral), kapasitas pertukaran kation (KPK) 27,2 me/100g (tinggi), kejenuhan basa 71% (sangat tinggi), kadar P_2O_5 ekstrak HCl 25% 27,8 mg/100g (sedang), kadar K_2O ekstrak HCl 25% 17,64 mg/100g (rendah), dan kadar C-Organik 1,81% (rendah). Hasil Status kesuburan tanah pada lahan dengan sistem budidaya padi secara sawah organik dan semi organik tergolong dalam kriteria rendah hingga sedang.

Kata Kunci : Status Kesuburan Kimia Tanah, Lahan Sawah, Pertanian Organik, Pertanian Semi Organik

**EVALUATION OF SOIL CHEMICAL FERTILITY STATUS ON PADDY
FIELDS WITH ORGANIC AND SEMI-ORGANIC RICE CULTIVATION
SYSTEM IN GEMPOL VILLAGE, SUB-DISTRICT
KARANGANOM, KLATEN REGENCY**

*By : Azzahra Jasmin Sejati
Guided by : R. Agus Widodo*

ABSTRACT

The difference in the organic and semi-organic rice cultivation system in Gempol Village can affect the chemical fertility of the soil. This study aims to analyze the status of soil fertility in rice fields. This study uses the survey method to determine the condition of the location and the purposive method, namely choosing a location that has an organic and semi-organic rice cultivation system. The determination of the sample point was determined by random sampling based on the land area. The assessment of soil fertility status uses the matching method with the technical instructions for soil fertility evaluation of the Bogor Soil Research Center in 1995, which is based on a combination of soil chemical properties. The results showed that the soil in rice fields with a semi-organic rice cultivation system showed an average pH value of 6.60 (neutral), cation exchange capacity (KPK) of 28.22 me/100g (high), alkaline saturation of 69.5% (high), P₂O₅ content of HCl extract 25% 23.41 mg/100g (medium), K₂O content of HCl extract 25% 20.26 mg/100g (low), and C-Organic content of 1.66% (low). Meanwhile, the characteristics of soil chemical properties in rice fields with organic rice cultivation systems showed an average pH value of 6.65 (neutral), cation exchange capacity (KPK) of 27.2 me/100g (high), alkaline saturation of 71% (very high), P₂O₅ content of HCl extract 25% 27.8 mg/100g (moderate), K₂O content of HCl extract 25% 17.64 mg/100g (low), and C-Organic content of 1.81% (low). Results Soil fertility status on land with an organic and semi-organic rice cultivation system is classified as low to medium criteria.

Keywords : Soil Chemical Fertility Status, Paddy Field, Organic Agriculture, Semi-Organic Agriculture