RINGKASAN

Padi (*Oryza sativa* L.) merupakan komoditas tanaman pangan yang penting di Indonesia. Produksi padi di Indonesia belum memenuhi kebutuhan dalam negeri, karena produksi tanaman padi per satuan luas masih rendah. Produksi padi jawa tengah pada tahun 2019 diperkirakan sebesar 9,66 juta ton GKG yang mana mengalami penurunan sebanyak 0,84 juta ton atau 8,04% dibandingkan dengan tahun 2018. Setiap faktor yang mempengaruhi produksi padi sangat penting diperhatikan untuk mempertahankan penghasilan para petani. Upaya untuk meningkatkan pertumbuhan dan produksi tanaman padi salah satu nya dengan cara pemupukan yang tepat. Penelitian ini bertujuan untuk: mengetahui persebaran C-Organik dan unsur hara Sulfur di lahan sawah sub DAS serayu hilir Kecamatan Kesugihan, Cilacap; mengetahui hubungan C-Organik dan sulfur tanah dengan hasil tanaman padi sawah di sub DAS serayu hilir Kecamatan Kesugihan, Cilacap; dan mengetahui rekomendasi pemberian pupuk organik untuk pertanaman di Kecamatan Kesugihan, Cilacap.

Penelitian ini dilaksanakan mulai dari persiapan survei yaitu Desember 2020 sampai Juli 2021 dengan metode survei pada tingkat ketelitian semi detail dengan skala 1:50.000. Penentuan titik sampel dilakukan berdasarkan Peta Satuan Lahan Homogen (SLH) yang dibuat dengan cara menumpang susunkan (*overlay*) peta yaitu Peta Administrasi, Peta Tata Guna Lahan, Peta Kemiringan Lereng dan Peta Jenis Tanah Kecamatan Kesugihan. Pengukuran sifat kimia tanah menggunakan metode yang biasa digunakan oleh Laboratorium Tanah Fakultas Pertanian Unsoed.

Hasil analisis sifat kimia tanah di lahan sawah Kesugihan menunjukkan bahwa pH tanah rata-rata bersifat netral, daya hantar listrik sangat rendah, potensial redoks rata-rata termasuk pada kelas tereduksi sedang, kandungan C-organik sangat rendah (0,02-0,18 %), kandungan sulfur tersedia rata-rata tersedia rendah (21-46 ppm). Rekomendasi pemupukan untuk meningkatkan unsur hara sulfur di Kesugihan dengan pupuk ZA sebesar 63,68 kg ZA/ha. Rekomendasi pemupukan untuk meningkatkan C-Organik tanah di Kecamatan Kesugihan dengan pupuk kandang sebesar 7-8 Ton/ha.

SUMMARY

Rice (Oryza sativa L.) is an important food crop commodity in Indonesia. Rice production in Indonesia has not met domestic needs, because rice production per unit area is still low. Central Java's rice production in 2019 is estimated at 9,66 million tons of milled dry unhulled rice which has decreased by 0,84 million tons or 8,04% compared to 2018. Every factor that affects rice production is very important to pay attention to in order to maintain the income of the farmers. farmer. One of the efforts to increase the growth and production of rice plants is by means of proper fertilization. This study aims to: determine the distribution of C-Organik and Sulfur nutrients in the rice fields of the Serayu downstream sub-watershed, Kesugihan; knowing the relationship between C-Organic and Sulfur soil with rice yields in the downstream Serayu sub-watershed, Kesugihan District; and find out recommendations for giving organic fertilizers for crops in Kesugihan District, Cilacap.

This research was carried out starting from survey preparation, namely December 2020 to July 2021 with a survey method at a semi-detailed level of accuracy with a scale of 1:50,000. Determination of the sample point is based on the Homogeneous Land Unit Map (SLH) which is made by overlaying the map, namely the Administrative Map, Land Use Map, Slope Map and Soil Type Map in Kesugihan District. The measurement of soil chemical properties uses the method commonly used by the Soil Laboratory of the Unsoed Faculty of Agriculture.

The results of the analysis of the chemical properties of the soil in the Kesugihan rice fields showed that the average soil pH was neutral, the electrical conductivity was very low, the average redox potential was in the moderately reduced class, the C-organic content was very low (0.02-0.18 %), available sulfur content is available low (21-46 ppm). Fertilization recommendation to increase sulfur nutrients in Kesugihan with ZA fertilizer is 63.68 kg ZA/ha. Fertilization recommendation to increase soil C-Organic in Kesugihan District with manure is 7-8 Ton/ha.