

**IMPROVEMENT OF SOME SOIL CHEMICAL PROPERTIES
AND RESULTS THROUGH RICE FIELDS
GIVING SOME TYPES OF ORGANIC INGREDIENTS**

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ABSTRACT

Rice (*Oryza sativa* L.) is the main food and strategic commodity for Indonesia. Based on data from the Central Statistics Agency (2019) the harvested area in 2019 is estimated at 10.68 million hectares with a production of 54.60 million tonnes of dry milled grain (GKG). If converted to rice, rice production in 2019 will reach around 31.31 million tonnes. Compared to 2018, rice production has decreased by 2.63 million tons. Compared to 2018, rice production has decreased by 2.63 million tons. Low soil organic matter is one of the main problems causing low productivity of paddy fields. Based on the research results of the Agricultural Research and Development Agency, it is known that the fertility rate of paddy fields in Indonesia is decreasing. One of the efforts to overcome the problems mentioned above is through balanced fertilization and improving soil quality by adding organic matter. This study aims to study the effect of applying various types of organic matter to lowland soil on the chemical properties of lowland soil and lowland rice yields. This research was conducted in the rice fields of Sri Agung Village, Batang Asam District, West Tanjung Jabung Regency, Jambi Province. The types of organic materials tested were petrogeanic (P_p), *solid decanter* (P_{sd}), chicken coop compost (P_{ka}), cow manure compost (P_{ks}), and industrial waste compost (P_{li}) as well as basic fertilizers in the form of urea, KCl, and SP-36. This study used the randomized block design method with 6 treatments and 5 replications using a 4:1 jajar legowo cropping system. The parameters to be observed in this study were pH, C-Organic and NPK for soil chemistry. As for the observed plant parameters, namely height, number of tillers, productive tillers and yields. The results of this study revealed that the application of organic matter had no significant effect on improving soil chemical properties and yields of rice plants. Judging from the average value of the results obtained by all treatments given organic matter, it has increased compared to treatments that were not given organic matter.

Key words : Organic Matter, Rice Plants

**PERBAIKAN BEBERAPA SIFAT KIMIA TANAH
DAN HASIL PADI SAWAH MELALUI
PEMBERIAN BEBERAPA JENIS BAHAN ORGANIK**

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ABSTRAK

Padi (*Oryza sativa* L.) merupakan bahan pangan utama dan komoditi strategis bagi Indonesia. Berdasarkan data Badan Pusat Statistik (2019) Luas panen pada 2019 diperkirakan sebesar 10,68 juta hektar dengan produksi sebesar 54,60 juta ton gabah kering giling (GKG). Jika dikonversikan menjadi beras, produksi beras pada 2019 mencapai sekitar 31,31 juta ton. Dibandingkan tahun 2018, produksiberas ini mengalami penurunan sebanyak 2,63 juta ton. Rendahnya bahan organik tanah merupakan salah satu permasalahan utama yang menyebabkan rendahnya produktivitas lahan sawah. Berdasarkan hasil penelitian Badan Litbang Pertanian diketahui bahwa tingkat kesuburan lahan sawah di Indonesia semakin menurun. Salah satu upaya dalam mengatasi permasalahan tersebut di atas adalah melalui pemupukan berimbang dan perbaikan kualitas tanah dengan penambahan bahan organik. Penelitian ini bertujuan untuk mempelajari pengaruh pemberian berbagai jenis bahan organik pada tanah sawah terhadap sifat kimia tanah sawah dan hasil padi sawah. Penelitian ini dilakukan di persawahan Desa Sri Agung Kecamatan Batang Asam, Kabupaten Tanjung Jabung Barat, Provinsi Jambi. Jenis bahan organik yang dicobakan adalah petroganik (P_p), solid decanter(P_{sd}), kompos kandang ayam(P_{ka}), kompos kandang sapi(P_{ks}), dan kompos limbah industri(P_{li}) serta pupuk dasar berupa urea, KCl, dan SP-36. Penelitian ini menggunakan metode RAK (rancangan acak kelompok) dengan 6 perlakuan dan 5 ulangan dengan menggunakan system tanam pola tanam jajar legowo 4:1. Parameter yang akan diamati dalam penelitian ini adalah pH, C-Organik dan NPK untuk kimia tanah. Sedangkan untuk parameter tanaman yang diamati yaitu tinggi, jumlah anakan, anakan produktif dan hasil panen. Hasil dari penelitian ini diketahui bahwa pemberian bahan organik berpengaruh tidak nyata dalam meningkatkan

sifat kimia tanah dan hasil panen tanaman padi. Dilihat dari nilai rata – rata hasil yang diperoleh semua perlakuan yang diberikan bahan organik mengalami peningkatan dibandingkan perlakuan yang tidak diberi bahan organik.

Kata Kunci : Bahan Organik, Tanaman Padi
