

PENGESAHAN

**PERUBAHAN BOBOT ISI TANAH MELALUI PEMBERIAN PUPUK
ORGANIK DAN DAMPAKNYA TERHADAP TANAMAN
SORGUM (*Sorghum bicolor* L.)**

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ABSTRACT

The purpose of this research aimed at investigating the effect of organic fertilizer on change weight of the soil and the weight of soil relationship to the growth and production of two sorghum varieties. This research was conducted in Desa Hulawa, Kecamatan Telaga, Kabupaten Gorontalo. The research was conducted in May to September 2015. This research used Rancangan Factorial RAK (RAK – Factorial). The first factor were the organic fertilizer municipal waste. It were three levels, without organic fertilizer, 15 ton/ha and the second factor were two levels varietas, Kawali and Numbuli varieties. Total of treatment combination were 6 combination, each repeated three times. So that, were 18 experimental plots in the field. The parameters observed in this research were the weight of soil (g/cm^3), height plants (cm), number of leaves (leaf), panicle length (cm), weight of 1000 seeds (g), and the weight of the plant seeds per plots (g). Analysis of the data was using Analysis Of Variance (ANOVA), if the treatment significantly, so that should conduct further test BNJ 5%. The results of the research showed the organic fertilizer municipal waste of the soil were real effect in value the weight of the soil. Organic fertilizer best municipal waste were in treatment 30 tons/ha with 1.12 g/cm^3 weight of the soil, and were a negative linear relationship between weight of the soil on the growth and production of sorghum, where the higher the value of the weight of soil, the growth and production of two varieties sorghum decreased.

Keyword: *The weight of the Soil, Organic Fertilizer, Sorghum*

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh pupuk organik terhadap perubahan bobot isi tanah dan hubungan bobot isi tanah terhadap pertumbuhan dan produksi dua varietas sorgum. Penelitian ini dilaksanakan di Desa Hulawa, Kecamatan Telaga, Kabupaten Gorontalo. Waktu penelitian dilaksanakan pada bulan Mei-September 2015. Penelitian ini menggunakan Rancangan Faktorial pola RAK (RAK-Faktorial). Faktor pertama yaitu pupuk organik sampah kota yang terdiri dari tiga taraf yakni tanpa pupuk organik, 15 ton/ha, 30 ton/ha dan faktor kedua yaitu varietas yang terdiri dari dua taraf yaitu varietas Numbu dan Kawali. Jumlah kombinasi perlakuan ada 6 kombinasi masing-masing diulang 3 kali sehingga terdapat 18 petak percobaan dilapangan. Parameter yang diamati dalam penelitian ini yaitu bobot isi tanah (g/cm^3), tinggi tanaman (cm), jumlah daun (helai), panjang malai (cm), bobot 1000 biji (g), dan berat biji tanaman perpetak (g). Analisis data menggunakan Analisis Of Variance (ANOVA), jika perlakuan berpengaruh nyata dilakukan uji lanjut BNJ 5%. Pemberian pupuk organik sampah kota pada tanah memberikan pengaruh yang nyata terhadap perubahan bobot isi tanah. Pemberian pupuk organik sampah kota terbaik terdapat pada perlakuan 30 ton/ha dengan bobot isi tanah 1.12 g/cm^3 , serta terdapat hubungan linear negatif antara bobot isi tanah terhadap pertumbuhan dan produksi tanaman sorgum, dimana semakin tinggi nilai bobot isi tanah pertumbuhan dan produksi dua varietas sorgum semakin menurun.

Kata kunci: *Bobot Isi Tanah, Pupuk Organik, Tanaman Sorgum*