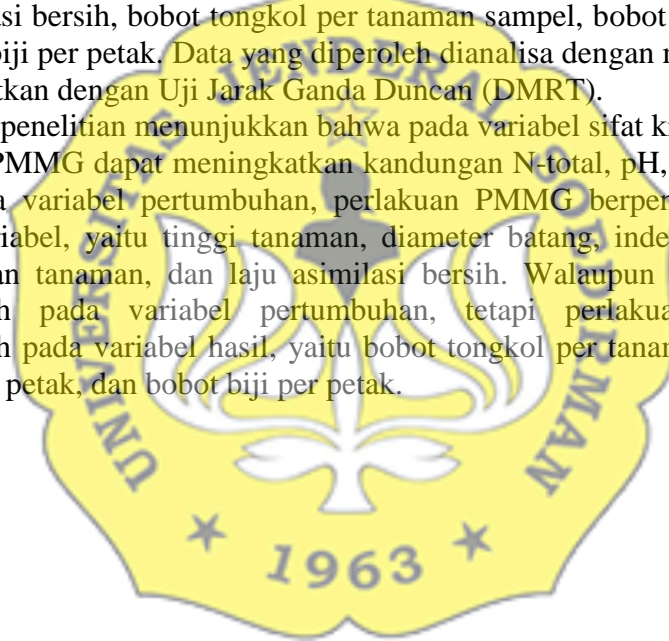


RINGKASAN

Penelitian ini bertujuan untuk mengetahui pengaruh aplikasi Pupuk Mikroba Multiguna (PMMG) terhadap beberapa sifat kimia tanah terpilih, pertumbuhan dan hasil tanaman jagung pada sistem tanam tumpangsari kedelai-jagung. Penelitian dilaksanakan di lahan percobaan Fakultas Pertanian di desa Karangwangkal, Purwokerto, sejak bulan Maret - Juli 2015.

Penelitian ini merupakan penelitian lapang, menggunakan rancangan petak terbagi. Main plot adalah penggunaan PMMG (M) terdiri dari M1 (Tanpa PMMG); M2 (Menggunakan PMMG). Sub plot adalah dosis pupuk anorganik (P) terdiri dari P0 (tanpa pupuk anorganik); P1 (dosis pupuk anorganik 50% dari rekomendasi); dan P2 (dosis pupuk anorganik 100% dari rekomendasi). Pengamatan dilakukan pada kandungan N-total, pH, daya hantar listrik tanah, tinggi tanaman, diameter batang, indeks luas daun, laju pertumbuhan tanaman, laju asimilasi bersih, bobot tongkol per tanaman sampel, bobot tongkol per petak, dan bobot biji per petak. Data yang diperoleh dianalisa dengan menggunakan uji F dan dilanjutkan dengan Uji Jarak Ganda Duncan (DMRT).

Hasil penelitian menunjukkan bahwa pada variabel sifat kimia tanah terpilih, perlakuan PMMG dapat meningkatkan kandungan N-total, pH, daya hantar listrik tanah. Pada variabel pertumbuhan, perlakuan PMMG berpengaruh nyata pada seluruh variabel, yaitu tinggi tanaman, diameter batang, indeks luas daun, laju pertumbuhan tanaman, dan laju asimilasi bersih. Walaupun perlakuan PMMG berpengaruh pada variabel pertumbuhan, tetapi perlakuan PMMG tidak berpengaruh pada variabel hasil, yaitu bobot tongkol per tanaman sampel, bobot tongkol per petak, dan bobot biji per petak.



SUMMARY

This study aims to determine the effect of Microbial Fertilizer Multipurpose (PMMG) on selected soil chemical properties, growth and yield of corn in intercropping system soybean-corn. Research was conducted at the experimental field of the Faculty of Agriculture in the village Karangwangkal, Purwokerto, from March – July 2015.

This study was a field experiment using split plot design. The main plot was the use of PMMG (M) comprising from M1 (without PMMG); M2 (with PMMG). The sub plot was doses of inorganic fertilizers (P) consisted of P0 (without inorganic fertilizers); P1 (50% dose of inorganic fertilizer from recommendation); and P2 (100% dose of inorganic fertilizer from recommendation). Observations were made on the content of N-total, pH, electrical conductivity of the soil, plant height, stem diameter, leaf area index, relative growth rates, net assimilation rates, weight of cobs per plant, weight of cobs per plot and weight of seeds per plot. The data obtained were analyzed using the F test and continued with Duncan Multiple Range Test (DMRT).

The results showed that the variables of selected soil chemical properties can improved the content of N-total, pH and electrical conductivity of the soil. On the growth variables, PMMG treatment had significantly affected the entire variables which are plant height, stem diameter, leaf area index, relative growth rates and net assimilation rates. Even though, the treatment PMMG had not significantly affected on the yield variables, which are weight of cobs per plant samples, weight of cobs per plot and weight of seeds per plot.

