

Muchamad Muchlis Nur Hakim 170311100011. Pengaruh Tingkat Kadar Air Tanah Terhadap Pertumbuhan dan Hasil Dua Varietas Jagung (*Zea mays*) pada Alfisol Pembimbing Dr. Ir. Eko Murniyanto, MP.

ABSTRAK

Madura merupakan sentra penghasil jagung. Bahan organik tanah rendah dan curah hujan rendah mengakibatkan ketersediaan air untuk tanaman terbatas. Tujuan penelitian untuk mengetahui pengaruh tingkat kadar air tanah terhadap pertumbuhan dan hasil tanaman jagung varietas lokal dan hibrida. Penelitian ini dilaksanakan di Screenhouse Prodi Agroteknologi Universitas Trunojoyo menggunakan tiga taraf pemberian air yaitu 100%, 80%, dan 60% kapasitas lapang dengan 2 jenis jagung yaitu varietas hibrida (BISI-2) dan lokal (Tambin). Data yang diperoleh dianalisis menggunakan ANOVA taraf 5% jika terdapat pengaruh nyata dilakukan uji lanjut BNJ (Beda Nyata Jarak). Hasil penelitian menunjukkan adanya pengaruh nyata pada bobot biomassa, panjang akar dan bobot akar. Pada jagung hibrida bobot biomassa mencapai 114,42 g, produksi mencapai 88,66 g/tanaman, dan nilai WUE mencapai 0.404 g/mm pada air 80% kapasitas lapang. Pada jagung Lokal bobot biomassa mencapai 103,54 g, produksi mencapai 35,99 g/tanaman, dan WUE mencapai 0.438 g/mm.

Kata kunci : alfisol, bahan organik, Jagung, kadar air

Muchamad Muchlis Nur Hakim 170311100011. Effect of Soil Moisture Levels on Growth and Yield of Two Varieties of Corn (Zea mays) on Alfisol Advisor Dr. Ir. Eko Murniyanto, MP.

ABSTRACT

Madura is a corn producing center. Low soil organic matter and low rainfall result in limited water availability for plants. The aim of the study was to determine the effect of soil moisture content on the growth and yield of local and hybrid maize varieties. This research was carried out at the Screenhouse of the Agrotechnology Study Program, Trunojoyo University using three levels of water supply, namely 100%, 80%, and 60% field capacity with 2 types of corn, namely hybrid varieties (BISI-2) and local varieties (Tambin). The data obtained were analyzed using ANOVA level 5% if there was a significant effect, further test of BNJ (Significant Difference in Distance) was carried out. The results showed that there was a significant effect on biomass weight, root length and root weight. In hybrid maize, the biomass weight reached 114.42 g, the production reached 88.66 g/plant, and the WUE value reached 0.404 g/mm at 80% water at field capacity. Local corn biomass weight reached 103.54 g, production reached 35.99 g/plant, and WUE reached 0.438 g/mm.

Keywords: alfisol, corn, moisture content, organic matter