

Intisari

Percobaan dilakukan dalam tiga tahap, yaitu 1. Percobaan laboratorium, 2. Percobaan di rumah kaca dan 3. Percobaan lapangan. Percobaan bertujuan untuk 1. Mengidentifikasi lengas tanah, laju infiltrasi dan laju kapiler, 2. Mengidentifikasi tiga varietas bawang merah paling baik pada perlakuan variasi tinggi permukaan air genangan dan dosis pupuk organik dan 3. Mengidentifikasi interaksi antara varietas, variasi tinggi permukaan air genangan/parit dan dosis pupuk organik.

Tahap 1. Percobaan dengan dua faktor, yaitu faktor 1. Tinggi permukaan air genangan (T), T_1 : 10 cm, T_2 : 20 cm dan T_3 : 30 cm. Faktor 2. Dosis pupuk organik (P), P_1 : 0 g/pot, P_2 : 70 g/pot dan P_3 : 140 g/pot. Dengan RAKL diulang tiga kali. Variabel yang diamati lengas tanah, laju infiltrasi dan laju kapiler. Data dianalisa dengan sidik ragam pada taraf kesalahan 5 % dan uji BNT 5%. Tahap 2. Percobaan dengan tiga faktor, yaitu faktor 1. Varietas bawang merah (V) : Bima, Kuning, Bangkok, Bauji, Sumenep dan Maja. Faktor 2. Tinggi Permukaan Air Genangan (T), T_1 : 10 cm, T_2 : 20 cm dan T_3 : 30 cm. Faktor 3. Dosis pupuk organik (P) : P_1 : 0 g/pot, P_2 : 70 g/pot dan P_3 : 140 g/pot. Menggunakan RAKL diulang tiga kali. Variabel yang diamati lengas tanah, variabel pertumbuhan dan hasil. Data dianalisa dengan sidik ragam pada taraf kesalahan 5 %, uji BNT 5% dan uji regresi linier. Tahap 3. Percobaan lapangan, ada tiga faktor, yaitu 1. Tinggi permukaan air parit (T) sebagai petak utama, terdiri T_1 : 10 cm, T_2 : 20 cm dan T_3 : 30 cm. Faktor 2. Varietas bawang merah (V) sebagai anak petak, terdiri V_1 : Bima, V_2 : Kuning dan V_3 : Sumenep. Faktor 3. Dosis pupuk organik (P) sebagai anak-anak petak, terdiri P_1 : 0 ton/ha, P_2 : 17,5 ton/ha dan P_3 : 35 ton/ha. Dengan rancangan petak petak terbagi dan diulang tiga kali. Variabel yang diamati ekofisiologi, pertumbuhan dan hasil. Data dianalisa dengan sidik ragam pada taraf kesalahan 5 %, jika beda nyata dilanjutkan dengan uji BNT 5%, uji regresi linier, uji regresi kuadratik dan uji kontras ortogonal.

Percobaan menghasilkan : 1. Ada interaksi positif antara perlakuan tinggi permukaan air genangan dengan dosis pupuk organik pada lengas tanah, laju infiltrasi dan laju kapiler. 2. Varietas bawang merah yang pertumbuhan dan hasilnya terbaik pada perlakuan tinggi permukaan air genangan dengan dosis pupuk organik berturut-turut adalah varietas Kuning, Bima, Sumenep, Bauji, Maja dan varietas Bangkok. 3. Adanya interaksi antara varietas, tinggi permukaan air parit dan pupuk organik yang diujikan dan terdapat pengaruh yang nyata terhadap respon ekofisiologi, pertumbuhan dan hasil tanaman bawang merah.

Kata Kunci : bawang merah, air parit, pupuk organik, fisiologi tanaman.

Abstract

The experiment was carried out in three stages, namely 1. Laboratory experiments, 2. Greenhouse experiments and 3. Field experiments. The experiment aims to 1. Identify soil moisture, infiltration rate and capillary rate, 2. Identify the three best shallot varieties in the treatment of variations in inundation surface height and organic fertilizer doses and 3. Identify interactions between varieties, variations in water level and dosage of organic fertilizers.

Phase 1. Experiment with two factors, namely factor 1. Inundation water surface height (T), T1: 10 cm, T2: 20 cm and T3: 30 cm. Factor 2. Dosage of organic fertilizer (P), P1: 0 g / pot, P2: 70 g / pot and P3: 140 g / pot. With RAKL repeated three times. The variables observed were soil moisture, infiltration rate and capillary rate. The data were analyzed with variance at 5% error level and 5% LSD test. Stage 2. Experiment with three factors, namely factor 1. Onion varieties (V): Bima, Kuning, Bangkok, Bauji, Sumenep and Maja. Factor 2. Inundation Water Surface Height (T), T1: 10 cm, T2: 20 cm and T3: 30 cm. Factor 3. Dosage of organic fertilizer (P): P1: 0 g / pot, P2: 70 g / pot and P3: 140 g / pot. Using RAKL was repeated three times. The variables observed were soil moisture, growth and yield variables. The data were analyzed with variance at 5% error level, 5% LSD test and linear regression test. Stage 3. Field experiments, there are three factors, namely 1. The water level of the trench (T) as the main plot, consisting of T1: 10 cm, T2: 20 cm and T3: 30 cm. Factor 2. Varieties of shallots (V) as subplots, consisting of V1: Bima, V2: Kuning and V3: Sumenep. Factor 3. Dosage of organic fertilizer (P) as subplots, consisting of P1: 0 ton / ha, P2: 17.5 ton / ha and P3: 35 ton / ha. With the plot design, the plots are divided and repeated three times. The variables observed were ecophysiology, growth and yield. Data were analyzed with variance at a 5% error level, if the real difference was followed by a 5% LSD test, linear regression test, quadratic regression test and orthogonal contrast test.

The experiments resulted in: 1. There is a positive interaction between the water surface height treatment and the dose of organic fertilizers on soil moisture, infiltration rate and capillary rate. 2. The varieties of shallots with the best growth and yield in the treatment of water level with a dose of organic fertilizer were Yellow, Bima, Sumenep, Bauji, Maja and Bangkok varieties, respectively. 3. There is an interaction between the varieties, the water level of the ditch and the organic fertilizers tested and there is a significant effect on the ecophysiological response, growth and yield of shallot plants.

Keywords: shallots, ditch water, organic fertilizer, plant physiology.