

RINGKASAN

Penelitian ini bertujuan untuk: (1) mengkaji media tanam yang terbaik terhadap pertumbuhan dan hasil bawang merah secara hidroponik sistem sumbu, (2) mengkaji varietas bawang merah yang memberikan pertumbuhan dan hasil terbaik secara hidroponik sistem sumbu (3) mengkaji interaksi antara media tanam yang berbeda pada dua varietas bawang merah secara hidroponik sistem sumbu.

Penelitian dilaksanakan pada 14 Januari sampai 1 April 2020 di *Screenhouse* Gelora Indah 2 Kecamatan Purwokerto Timur dan Laboratorium Agronomi dan Hortikultura Fakultas Pertanian, Universitas Jenderal Soedirman. Rancangan Penelitian yang digunakan yaitu Rancangan Acak Kelompok Lengkap (RAKL) yang tersusun secara faktorial menggunakan dua faktor percobaan. Faktor pertama yaitu berbagai macam media tanam (A) yang terdiri dari 6 macam yaitu, $A_0 = \text{Rockwool}$, $A_1 = \text{Cocopeat}$, $A_2 = \text{Arang sekam}$, $A_3 = \text{Cocopeat } 75\% + \text{ arang sekam } 25\%$, $A_4 = \text{Cocopeat } 50\% + \text{ arang sekam } 50\%$, dan $A_5 = \text{Cocopeat } 25\% + \text{ arang sekam } 75\%$. Faktor kedua yaitu varietas bawang merah (B) yang terdiri dari 2 macam yaitu $B_1 = \text{Varietas Bima Brebes}$ dan $B_2 = \text{Varietas Batu Ijo}$. Variabel yang diamati yaitu tinggi tanaman (cm), jumlah daun (helai), luas daun (cm^2), bobot akar segar (g), bobot akar kering (g), volume akar (mm^3), jumlah anakan (anakan), jumlah umbi (umbi), bobot umbi segar rumpun (g) dan bobot umbi kering rumpun (g).

Hasil penelitian menunjukkan bahwa media tanam *rockwool* merupakan media tanam terbaik pada variabel bobot akar kering, bobot umbi segar rumpun dan bobot umbi kering rumpun lebih tinggi dibandingkan media tanam *cocopeat*, arang sekam, dan kombinasi *cocopeat* + arang sekam. Perlakuan varietas memberikan pertumbuhan dan hasil yang berbeda-beda. Varietas Bima Brebes memberikan rerata variabel bobot akar kering, jumlah anakan dan jumlah umbi lebih banyak dibandingkan varietas Batu Ijo, sedangkan varietas Batu Ijo memberikan rerata variabel tinggi tanaman, luas daun, dan bobot umbi kering

rumpun lebih banyak dibandingkan varietas Bima Brebes. Terdapat interaksi media tanam dan varietas menunjukkan hasil yang nyata terhadap luas daun dengan nilai tertinggi pada media tanam *cocopeat* 75% + arang sekam 25% dan varietas Batu Ijo sebesar 2262,74 cm².



SUMMARY

This study aims to: (1) examine the best planting media for the growth and yield of shallots in the hydroponic wick system, (2) examine shallot varieties that provide the best growth and yield in the hydroponic wick system and (3) examine the interactions between planting media the two varieties of red shallots in the hydroponic wick system.

The research was conducted from 14 January until 1 April 2020 at the Gelora Indah 2 District Screenhouse, East Purwokerto and the Agronomy and Horticulture Laboratory of the Faculty of Agriculture, Jenderal Soedirman University. The research design used was a randomized block design (RBD) which was arranged factually using two experimental factors. The first factor was a variety of growing media consisting of 6 types, namely, rockwool, cocopeat, husk charcoal, 75% cocopeat + 25% husk charcoal, 50% cocopeat + 50% husk charcoal, and 25% cocopeat + 75% husk charcoal. The second factor was shallot varieties which consist of 2 kinds, namely, Bima Brebes and Batu Ijo. The variables observed were plant height (cm), leaf number (leaf), leaf area (cm²), fresh root weight (g), dry root weight (g), root volume (mm³), number of tillers (tillers), number of onion (onion), fresh onion weight clump (g) and dry onion weight clump (g).

The results showed that (1) the rockwool growing medium was the best growing medium for the variable dry root weight, fresh onion weight clump and dry onion weight clump which were higher when compared to the media planting cocopeat, husk charcoal, and a combination of cocopeat + husk charcoal. (2) The treatment of varieties gives different growth and yield. Bima Brebes variety had more dry root weight, the number of onion and the number of onion more than the Batu Ijo variety, while the Batu Ijo variety had more plant height variables, leaf area and dry onion weight clump more than Bima Brebes variety. (3) The interaction of planting media and varieties showed significant results on leaf area with the highest value on 75% cocopeat + 25% husk charcoal and the Batu Ijo

variety of 2262.74 cm².

