

RINGKASAN

Produktivitas tomat di Provinsi Jawa Barat tahun 2023 mencapai 268,1 ribu ton. Dari jumlah tersebut, Kabupaten Tasikmalaya hanya menyumbang 2.450 ton dengan produktivitas 9,01 ton/ha. Rendahnya produktivitas tomat di Kabupaten Tasikmalaya tersebut disebabkan oleh adanya layu bakteri *Ralstonia solanacearum*, patogen yang kerap menyerang tanaman tomat terutama pada musim tanam kedua atau ketiga yang bertepatan dengan musim kemarau sehingga menurunkan produksi. Oleh karena itu, diperlukan upaya pengendalian terhadap patogen tersebut. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian mikoriza dan umur bibit terhadap pertumbuhan, hasil, dan frekuensi serangan layu bakteri pada tanaman tomat.

Penelitian ini dilakukan di Kampung Leuwiseeng, Desa Sukaherang, Kecamatan Singaparna, Kabupaten Tasikmalaya dari bulan Juli–November 2024. Penelitian ini menggunakan Rancangan Petak Terbagi (*Split Plot*) dengan dua faktor perlakuan dan tiga kali ulangan. Faktor pertama adalah pemberian mikoriza (tanpa mikoriza dan pemberian mikoriza pada saat penyemaian) sedangkan faktor kedua adalah umur bibit (umur bibit 16 hari, umur bibit 21 hari, umur bibit 26 hari, dan umur bibit 31 hari). Variabel yang diamati meliputi tinggi tanaman, jumlah daun, jumlah cabang primer, luas daun, bobot segar tanaman, bobot kering tanaman, umur berbunga, umur panen, jumlah buah per tanaman, bobot buah per tanaman, bobot segar per buah, dan frekuensi serangan layu bakteri. Analisis data dilakukan dengan menggunakan uji F pada taraf kesalahan 5%, dan jika nyata dilanjutkan dengan uji lanjut *Duncan's Multiple Range Test* (DMRT) pada taraf kesalahan 5 %.

Hasil penelitian menunjukkan bahwa pemberian mikoriza pada saat penyemaian tidak berpengaruh terhadap semua variabel pengamatan. Perlakuan umur bibit berpengaruh nyata terhadap tinggi tanaman, jumlah daun, bobot segar tanaman, umur berbunga, umur panen, dan frekuensi serangan layu bakteri pada umur 35 HST. Interaksi pemberian mikoriza dan umur bibit berpengaruh nyata terhadap umur panen dan bobot segar per buah. Umur panen tercepat dicapai oleh perlakuan pemberian mikoriza dan umur bibit 21 hari, serta bobot segar per buah tertinggi dicapai oleh perlakuan tanpa mikoriza dan umur bibit 31 hari.

SUMMARY

*Tomato productivity in West Java Province reached 268.1 thousand tons in 2023. Of that total, Tasikmalaya Regency contributed only 2,450 tons, with a productivity of 9.01 tons/ha. The low productivity in Tasikmalaya is caused by bacterial wilt caused by *Ralstonia solanacearum*, a pathogen that frequently attacks tomato plants, especially during the second or third cropping season that coincides with the dry season, thereby reducing production. Therefore, control measures against this pathogen are necessary. This study aimed to determine the effect of mycorrhiza application and seedling age on the growth, yield, and frequency of bacterial wilt incidence in tomato plants.*

This research was conducted in Kampung Leuwiseeng, Desa Sukaherang, Kecamatan Singaparna, Tasikmalaya Regency from July to November 2024. The study employed a split-plot design with two treatment factors and three replications. The first factor was mycorrhiza application (no mycorrhiza versus mycorrhiza application at seeding), while the second factor was seedling age (16 days, 21 days, 26 days, and 31 days). The variables observed included plant height, number of leaves, number of primary branches, leaf area, fresh plant weight, dry plant weight, days to flowering, days to harvest, number of fruits per plant, fruit weight per plant, fresh fruit weight, and the frequency of bacterial wilt incidence. Data analysis was performed using an F-test at a 5% significance level, and if significant, was followed by Duncan's Multiple Range Test (DMRT) at the same error level.

The results showed that mycorrhiza application at the seeding stage had no effect on any of the observed variables. The seedling age treatment significantly affected plant height, number of leaves, fresh plant weight, days to flowering, days to harvest, and the frequency of bacterial wilt incidence at 35 days after transplanting. The interaction between mycorrhiza application and seedling age significantly affected days to harvest and fresh fruit weight. The earliest harvest was achieved with the treatment of mycorrhiza application combined with a seedling age of 21 days, while the highest fresh fruit weight was obtained under the treatment without mycorrhiza and with a seedling age of 31 days.