

RINGKASAN

Cabai rawit (*Capsicum frutescens* L.) merupakan produk hortikultura yang banyak dikonsumsi manusia. Kebutuhan nasional akan cabai rawit setiap tahunnya meningkat, akan tetapi produksi cabai rawit masih tergolong rendah yang disebabkan oleh tanah yang kurang unsur hara. Maka dari itu perlu dilakukan suatu cara untuk menjaga kestabilan dan meningkatkan produktivitas dengan menggunakan media tanam dan jenis pupuk yang cocok dan baik bagi tanaman. Penelitian ini bertujuan untuk: (1) mengetahui pengaruh media tanam terhadap pertumbuhan dan hasil cabai rawit, (2) mengetahui pengaruh jenis pupuk berbasis azolla terhadap pertumbuhan dan hasil cabai rawit, dan (3) mengetahui interaksi antara media tanam dan jenis pupuk berbasis azolla terhadap pertumbuhan dan hasil tanaman cabai rawit.

Penelitian ini dilaksanakan di *screen house* dan laboratorium agronomi hortikultura Fakultas Pertanian, Universitas Jenderal Soedirman, Purwokerto Utara, Banyumas dengan ketinggian 110 meter di atas permukaan laut, mulai dari bulan November 2018 sampai Maret 2019. Rancangan yang digunakan Rancangan Acak Kelompok dengan dua faktor dan tiga ulangan. Faktor pertama adalah media tanam yaitu tanah dan kompos (M1), tanah+kompos+ arang sekam (M2), dan tanah+kompos+cocopeat (M3). Faktor kedua adalah jenis larutan hara yaitu NPK anorganik mutiara (Kontrol), Pupuk organik cair *azolla* petani (P1), pupuk organik cair *azolla* ikan patin (P2), dan pupuk organik cair ekstrak *azolla* (P3). Data hasil percobaan dianalisis menggunakan *analysis of variants* (ANOVA) pada taraf kesalahan 5% dan jika nyata dilanjutkan dengan uji *Duncan's Multiple Range Test* (DMRT).

Hasil penelitian menunjukkan bahwa media tanam meningkatkan bobot segar tajuk, jumlah buah per tanaman, dan bobot segar buah. Jenis pupuk meningkatkan bobot segar tajuk, jumlah buah per tanaman, dan bobot segar buah. Interaksi antara media tanam dan jenis pupuk meningkatkan bobot segar tajuk. Media tanam tanah+kompos+arang sekam meningkatkan bobot segar tajuk, jumlah buah per tanaman, dan bobot segar buah per tanaman secara berturut-turut sebesar 123,1%, 107,11%, 107,82% dibandingkan tanah+kompos. Jenis pupuk NPK memberikan bobot segar tajuk tertinggi sebesar 223,69 gram, pupuk organik ikan patin meningkatkan jumlah buah per tanaman dan bobot segar buah per tanaman secara berturut-turut sebesar 123,57%, 149,07% dibandingkan kontrol.

SUMMARY

Chilli pepper (*Capsicum frutescens* L.) is a horticulture product which many consumed by humans. National demand for chilli pepper increases every year, but the production of chilli pepper is still relatively low due to soil lack of nutrients. Therefore it is necessary to do a way to maintain stability and increase productivity by using growth media and types of fertilizers that are suitable and good for plants. This study aims to: (1) determine the effect of growth media on the growth and yield of chilli pepper, (2) determine the effect of azolla-based fertilizer on growth and yield of chilli pepper, and (3) determine the interaction between growth media and azolla-based fertilizer type on the growth and yield of chilli pepper plants.

This research was conducted in plastic house and horticultural agronomy laboratory of the Faculty of Agriculture, Jenderal Soedirman University, North Purwokerto, Banyumas with height of 110 meters above sea level, started from November 2018 to March 2019. The design was used was Randomized Block Design with 2 factors and repeated three times. The first factor is the growth media, namely soil and compost (M1), soil+compost+charcoal husk (M2), and soil+compost+cocopeat (M3). The second factor is the type of nutrient solution, namely NPK pearl inorganic (Control), azolla liquid organic fertilizer (P1), liquid azolla catfish fertilizer (P2), and liquid organic fertilizer azolla extract (P3). The results of the experimental data were analyzed using analysis of variance (ANOVA) at the error level of 5% and if evidently continued with the Duncan's Multiple Range Test (DMRT).

The results showed that the growth medium increased the fresh weight of the crown, the number of fruits per plant, and the fresh weight of the fruit. This type of fertilizer increases the fresh weight of the crown, the number of fruits per plant, and the fresh weight of the fruit. The interaction between the growth medium and the type of fertilizer increases the fresh weight of the canopy. Growing media+compost+charcoal husk increases canopy fresh weight, number of fruits per plant, and fruit fresh weight per plant respectively 123.1%, 107.11%, 107.82% compared to soil + compost. NPK fertilizer type gave the highest fresh weight of canopy by 223.69 gram, organic catfish fertilizer increased the number of fruit per plant and the fresh weight of fruit per plant successively by 123.57%, 149.07% compared to control.