

RINGKASAN

Pakcoy (*Brassica rappa* L.) merupakan tanaman sayuran komersial yang mempunyai nilai ekonomi tinggi dan gizi yang tinggi. Banyaknya permintaan sayuran pakcoy tidak diimbangi dengan produksi yang dihasilkan. Lahan pertanian produktif semakin sempit dan jumlah penduduk semakin meningkat menjadi permasalahan utama dalam pemanfaatan dalam budidaya pertanian. Salah satu peluangnya adalah pemanfaatan tanah entisol lahan pasir pantai yang dapat mengakibatkan cekaman garam pada tanaman . Salah satu upaya yang dapat dilakukan untuk mengurangi pengaruh buruk dari cekaman garam dengan pemupukan dan pemberian pembenah tanah. Tujuan dilaksanakannya penelitian ini antara lain 1) mengetahui pengaruh stres kegaraman terhadap karakteristik agronomi tanaman pakcoy pada tanah entisol, 2) mengetahui pengaruh dosis pupuk silika terhadap karakteristik agronomi tanaman pakcoy pada tanah entisol, 3) mengetahui interaksi dosis pupuk Si dan stres kegaraman terhadap karakteristik agronomi tanaman pakcoy pada tanah entisol

Penelitian ini dilakukan pada *Screen house* Fakultas Pertanian Universitas Jenderal Soedirman dari bulan Mei hingga Agustus 2019. Rancangan percobaan yang digunakan adalah rancangan acak kelompok (RAK) faktorial yang terdiri atas 16 perlakuan dan 3 kali ulangan. Perlakuan yang dicoba meliputi dua faktor yaitu stres kegaraman dengan taraf 0; 1; 2; dan 3 ds/m. Faktor kedua adalah dosis pupuk silika yaitu 0; 5; 10; dan 15 g/polybag. Variabel pengamatan meliputi tinggi tanaman (cm), jumlah daun (helai), luas daun (cm²), bobot tajuk segar (g), bobot tajuk kering (g), bobot akar segar (g), bobot akar kering (g), panjang akar (cm), dan kehijauan daun. Data dianalisis dengan uji F (ANOVA) dan uji lanjut dengan *Duncan's Multiple Range Test* (DMRT) dengan tingkat kesalahan 5%.

Hasil penelitian menunjukkan bahwa pemberian stres kegaraman menurunkan tinggi tanaman dan jumlah daun tetapi tidak berpengaruh terhadap luas daun, bobot tajuk segar, bobot akar segar, bobot akar kering, bobot tajuk kering, panjang akar dan kehijauan daun tanaman pakcoy. Pemberian dosis pupuk silika (Si) tanaman pakcoy meningkatkan tinggi tanaman, jumlah daun dan bobot tajuk segar tetapi tidak berpengaruh terhadap luas daun, bobot akar segar, bobot akar kering, bobot tajuk kering, panjang akar dan kehijauan daun tanaman pakcoy. Stres kegaraman dan pupuk silika tidak memberikan pengaruh interaksi terhadap karakteristik agronomi tanaman yang diamati.

SUMMARY

Pakchoy (Brassica rappa L.) is a commercial vegetable crop that has high economic value as well as high nutrition. The high demand for pakchoy is not matched with the production yield. The narrower of productive agricultural land and the increasing population become the major problem in the utilization of agricultural cultivation. One of the opportunities is the utilization of entisol soils of sandy coastal land which can cause salt stress in plants. One effort that can be done to reduce the adverse effects of salt stress is by fertilizing and providing soil amelioration. The objectives of this research were 1) to find out the effect of salt stress on the agronomic characteristics of pakchoy plants on entisol soil, 2) to determine the effect of silica fertilizer doses on the agronomic characteristics of pakchoy plants on entisol soil, 3) to find out the interaction of Si fertilizer dosage and salinity stress on agronomic characteristics of pakchoy plants on entisol soils.

This research was conducted at the Screen house of the Faculty of Agriculture, Jenderal Soedirman University from May to August 2019. The experimental design used was a factorial randomized block design (RBD) consisting of 16 treatments and three replications. The treatments that were tried included two factors namely stress salinity with a level of 0; 1; 2; and 3 ds/m, and the dose of silica fertilizer which varied from 0; 5; 10; and 15 g/polybag. Observation variables included plant height (cm), number of leaves (strands), leaf area (cm²), fresh weight of crown (g), dry weight of crown (g), fresh weight of root (g), dry weight of root (g), root length (cm), and greenness of leaves. Data were analyzed by F test (ANOVA) and further tests by Duncan's Multiple Range Test (DMRT) with an error rate of 5%.

The results showed that giving salinity stress had an effect on reducing plant height and number of leaves but did not affect leaf area, crown fresh weight, root fresh weight, root dry weight, crown dry weight, root length and leaf greenness of Pak choy plants. Giving the doses of silica fertilizer (Si) had an effect on increasing the plant height, number of leaves and crown fresh weight but did not affect leaf area, root fresh weight, root dry weight, crown dry weight, root length and leaf greenness of Pak choy plants. Salinity stress and silica fertilizer did not give an interaction effect on the agronomic characteristics of the observed plants.