

## RINGKASAN

Sawi merupakan tanaman sayuran yang mengandung serat dan gizi yang cukup lengkap sehingga permintaannya cukup tinggi. Budidaya tanaman sawi saat ini masih menggunakan pupuk anorganik sehingga menyebabkan ketidakseimbangan unsur hara di dalam tanah. Oleh karena itu, perlu dilakukan budidaya tanaman sawi secara organik. Teknik budidaya yang dapat mendukung produksi sawi dan berdampak positif terhadap lingkungan dapat menggunakan air kelapa dan pupuk kascing. Tujuan dilaksanakannya penelitian ini antara lain (1) mengetahui pengaruh waktu perendaman benih dalam air kelapa terhadap pertumbuhan dan hasil tanaman sawi, (2) mengetahui pengaruh dosis pupuk kascing optimum terhadap pertumbuhan dan hasil tanaman sawi, (3) mengetahui interaksi antara perendaman benih dalam air kelapa dan pemberian pupuk kascing terhadap pertumbuhan dan hasil tanaman sawi.

Penelitian dilakukan pada rumah plastik Fakultas Pertanian, Universitas Jenderal Soedirman, Kelurahan Karangwangkal, Kecamatan Purwokerto Utara, Kabupaten Banyumas, Jawa Tengah dengan ketinggian tempat 110 m dpl. Penelitian dilaksanakan mulai bulan 28 November sampai 19 Desember 2019. Rancangan percobaan yang digunakan adalah Rancangan Acak Kelompok Lengkap (RAKL) yang terdiri atas 15 perlakuan dan 3 kali ulangan. Perlakuan yang dicoba terdiri dari dua faktor. Faktor pertama yaitu perendaman benih dalam 25 ml air kelapa yang dicampur dengan 75 ml akuades terdiri dari 3 taraf yaitu, tanpa perendaman, perendaman selama 4 jam dan perendaman selama 8 jam. Faktor kedua yaitu dosis pupuk kascing terdiri dari 5 taraf yaitu, 0 g per polybag, 40 g per polybag, 60 g per polybag, 80 g per polybag dan 100 g per polybag. Variabel yang diamati meliputi tinggi tanaman (cm), jumlah daun (helai), luas daun (cm<sup>2</sup>), panjang akar (cm), bobot tanaman segar (g), bobot tanaman kering (g), bobot tajuk segar (g), bobot tajuk kering (g), bobot akar segar (g) dan bobot akar kering (g).

Hasil penelitian menunjukkan bahwa perendaman benih dalam air kelapa selama 4 jam lebih baik daripada tanpa perendaman benih dan perendaman benih selama 8 jam. Dosis pupuk kascing mampu meningkatkan pertumbuhan dan hasil tanaman sawi dengan dosis 100 g per polybag merupakan dosis terbaik pada tanaman sawi. Interaksi antara perendaman benih dalam air kelapa dan dosis pupuk kascing berpengaruh nyata terhadap bobot tanaman segar, bobot tajuk kering, bobot akar segar dan bobot akar kering.

## SUMMARY

*Mustard green is a vegetable contain fiber and a quiet full nutrition so its demand is quiet high. Its cultivations is still using inorganic fertilizer which makes the imbalance of nutrients in the soil. Therefore, organic Mustard Green cultivation is needed. Cultivation technique that can support and make a positive impact to the environment are using coconut water and vermicompost fertilizer. This research aimed to know : (1) the effect of soaking time of the seeds in coconut water on the growth and yield of mustard plants, (2) the effect of vermicompost fertilizer doses on the growth and yield of mustard plants, (3) the interaction between the soaking the seeds in coconut water and applying vermicompost fertilizer to the growth and yield of the mustard plants.*

*This research was conducted at Faculty of Agriculture Jenderal Soedirman University's green house, Karangwangkal, North Purwokerto District, Banyumas Regency, Central Java with the height of the place is 125 meters above sea level. This study was conducted starting November 28 to December 19, 2019. The experimental design used was randomized complete block design consisting of 15 treatments and 3 replications. The treatment tried included two factors. The first one was soaking the seeds with 25 ml coconut water mixed with 75 ml distilled water consisting of 3 levels there were no soaking, 4 hours soaking, and 8 hours soaking. The second factor was vermicompost doses consisting of 5 levels, there were 0 g/polybag, 40 g/polybag, 60 g/polybag, 80 g/polybag, and 100 g/polybag. Observed variables were plants height (cm), number of leaves (strands), leaf area, root length (cm), fresh plants weight (g), dry plants weights (g), fresh canopy weight (g), dry canopy weight (g), fresh root weight (g), dry root weight (g).*

*Result of the research showed that : (1) the 4 hours seeds soaking was better than the 0 and 8 hours seed soaking (2) Vermicompost fertilizer doses could rise the growth and yield of mustard, the best doses was 100 g/polybag (3) Interaction between seed soaked with coconut water and vermicompost doses significantly affected the fresh plants weight, dry canopy weight, fresh root weight and dry root weight.*