

**HIDROPONIK PASANG SURUT TANAMAN PAKCOY (*Brassica rapa* L.)
PADA BERBAGAI JENIS MEDIA TANAM DAN
FERTIGASI BERSELANG**

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ABSTRAK

Budidaya pakcoy secara hidroponik dapat berhasil apabila kebutuhan air, sirkulasi udara dan hara tanaman terjamin. Penelitian ini bertujuan untuk mengetahui interaksi antara jenis media tanam dan fertigasi berselang, mengetahui media tanam yang paling baik dan fertigasi berselang yang paling baik pada budidaya pakcoy secara hidroponik pasang surut. Penelitian dilaksanakan pada bulan Desember 2018 sampai Januari 2019 di *Green House* Purwomartani, Kalasan, Sleman. Metode penelitian menggunakan percobaan lapangan disusun dalam Rancangan Petak Terbagi (*Split Plot*). Petak utama yaitu perlakuan pemberian nutrisi fertigasi berselang yang terdiri dari tiga taraf yaitu F1 = Fertigasi berselang 40 menit, F2 = Fertigasi berselang 30 menit dan F3 = Fertigasi berselang 20 menit. Anak petak yaitu jenis media tanam yang juga terdiri dari tiga taraf yaitu M1 = Pasir Malang, M2 = Sekam Mentah, dan M3 = Arang sekam. Parameter yang diamati adalah tinggi tanaman, jumlah daun, kadar klorofil, warna daun, luas daun, panjang akar, bobot segar tanaman, bobot kering tajuk, bobot basah akar, bobot kering akar, rasio tajuk akar dan volume akar. Data pengamatan dianalisis keragaman menggunakan analisis sidik ragam (ANOVA) pada taraf α 5%. Untuk mengetahui perbedaan rata rata perlakuan digunakan uji jarak berganda Duncan (DMRT) pada taraf α 5 %. Hasil penelitian diperoleh tidak terdapat interaksi antara jenis media tanam dan fertigasi berselang pada semua parameter kecuali jumlah daun umur 1 mst (minggu setelah tanam) dan 2 mst. Perlakuan media pasir malang merupakan media yang paling baik pada semua parameter kecuali tinggi tanaman 1 mst, luas daun 2 mst, rasio tajuk akar dan volume akar. Perlakuan fertigasi berselang 20 menit merupakan fertigasi yang paling baik pada parameter kadar klorofil dan bobot kering tajuk.

Kata kunci : *Pakcoy, Hidroponik Pasang Surut, Fertigasi Berselang, Media Tanam.*

**EBB AND FLOW HYDROPONIC SYSTEM OF PAKCOY
(*Brassica rapa* L.) IN VARIOUS TYPES OF GROWING MEDIA AND
INTERMITTENT FERTIGATION**

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ABSTRACT

Hydroponic pakcoy cultivation will be successful if the needs of water, air and nutrient circulation are guaranteed. This research aimed to determine the interaction between types of growing media and intermittent fertigation, knowing the best growing media and intermittent fertigation that were best in pakcoy cultivation with ebb and flow hydroponic system. The research was conducted in December 2018 to January 2019 at Green House Purwomartani, Kalasan, Sleman. Research methods using field experiments were arranged in the Split Plot Design. The main plot was intermittent fertigation treatment which consists of three levels, namely F1 = 40 minutes intermittent fertigation, F2 = 30 minutes intermittent fertigation and F3 = 20 minutes intermittent fertigation. The subplot was types of growing media which also consists of three levels, namely M1 = *Malang* Sand, M2 = Raw Rice Husk, and M3 = Rice Husk Charcoal. The parameters observed were plant height, leaf number, chlorophyll content, leaf color, leaf area, root length, plant fresh weight, shoot dry weight, root wet weight, root dry weight, root shoot ratio and root volume. The diversity of observational data was analyzed using analysis of variance (ANOVA) at the level of α 5%. To finding out the difference in average treatment, Duncan's multiple distance test (DMRT) was used at the level of α 5%. The results showed that there was no interaction between the type of growing media and intermittent fertigation on all parameters except the number of leaves aged 1 wap (weeks after planting) and 2 wap. The treatment of *malang* sand is the best medium for all parameters except plant height 1 wap, leaf area 2 wap, root shoot ratio and root volume. The 20 minutes fertigation is the best fertigation treatment on the parameters of chlorophyll content and shoot dry weight.

Key word: *Pakcoy, Ebb and Flow Hydroponic System, Intermittent Fertigation, Growing media*