The Growth and Yield Response of Rice Plant (Oryza sativa) towards the Water-Husk Planting Media Based on Intermittent Irrigation

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ABSTRACT

The annual demand for rice in Indonesia continues to increase along with population growth while the area of paddy fields is decreasing. Therefore the idea of soil-less rice cultivation as an alternative solution emerged. This study aims to analyze the response of two varieties of rice plants (Oryza sativa) to two types of soil-less media, namely water, and rice husk. The experiment used a completely randomized design (CRD) with two factors and three replications. The first factor was the ratio of water and husk media consisting of five ratios namely 1:0, 4:1, 6:1, 8:1, and 10:1. The second factor was rice variety consisting of Inpari 46 and Mapan 05. The results showed that the interaction between the media ratio of 4:1 and the Mapan 05 variety showed the highest results on plant height (91.2 cm), shoot fresh weight (268.20 g), root fresh weight (332.3 g), shoot dry weight (132.37 g), and root dry weight (162.365 g). Individually, a media ratio of 10:1 had a significant effect on the highest number of grains per panicle (195.2 grains) and 1000 seed weights (32.51 g). Overall, Mapan 05 dominated Inpari 46 in all observed parameters.

Keywords: Planting Media, Rice Varieties, Intermittent