

**The Effect of Water and Husk Ratio as Soilless Growing Media on  
Growth and Yield of Three Functional Rice Varieties.**

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**ABSTRACT**

The decreasing area of cultivated land in Indonesia is an obstacle to increasing rice production, especially functional rice. Therefore agricultural innovations that accommodate the use of limited resources such as urban farming and soilless farming need to be encouraged. This study aims to examine the growth and yield of three functional rice varieties grown on soilless media (a mixture of water and husks). The experiment was conducted using a completely randomized design with two factors and three replications. The first factor was soilless media with several ratios of water and husks namely 6:1, 10:1, and 16:1. The second factor was rice varieties consisting of Merah Lokal A2, Merah Lokal A5, and Watu Dodol A3 variety. Variables observed: plant height, root length, stem diameter, panicle length, total number of grains per panicle, grain weight per clump, and 1000 grains weight. The results showed no interaction between the two factors tested on all observed variables. As a single factor, the Merah Lokal A5 variety statistically had the best response on plant height (87.48 cm), grain weight per hill (47.37 g), and 1000 seed weight (28.09 g). Significantly, the soilless medium 6:1 recorded the highest number for root length (34.39 cm), while the soilless medium 16:1 showed the largest number of 1000 grains weight (27.87 g). It can be concluded that on a single factor, both treatments showed a significant effect on several observed variables although both did not show any interaction in influencing the growth and yield of the functional rice studied.

*Keywords: black rice, husk, red rice, soilless culture.*