

**Growth and Yield Responses of Two Red Rice
Varieties to Soilless Media**

Supervised by Tirto Wahyu Widodo, S.P., M.P.

Widya Ayu Safitri

Study Program of Food Crop Production Technology

Department of Agricultural Production

ABSTRACT

Indonesia's functional rice demand is increasing. Ironically the area of rice fields is depleting, therefore agricultural innovations such as urban farming incorporated with soilless media need to be encouraged. This study was to examine the effect of the application of soilless growing media consisting of water and rice husks with different ratios on the growth and yield of two functional rice varieties. A completely randomized design (CRD) with two factors, namely soilless media (water and rice husk) (10:1, 12:1, 14:1, and 16:1) and rice varieties (Merah A2 and Merah A5) was used in the study. Parameters observed included plant height, stem diameter, number of productive tillers, root length, shoot fresh weight, root fresh weight, shoot dry weight, root dry weight, and grain weight per clump. The results showed that there was an interaction between soilless media and rice varieties where the highest fresh root weight and root weight values were recorded at 133.70 g and 30.47 g respectively. Significantly, the Merah A5 variety showed the highest response on plant height (82.75 g), stem diameter (8.48 mm), shoot fresh weight (187.83 g), shoot dry weight (34.45 g), and grain weight per clump (51.04 g). Meanwhile, soilless media 16:1 dominated only productive tillers (25.33 g). Overall the application of soilless media of water and rice husk affected the growth and yield of the two functional rice varieties studied.

Keywords: Red rice varieties, Rice husk, Soilless media, Urban Farming