***GROWTH AND YIELD RESPONSE OF FUNCTIONAL RICE THROUGH ABC MIX APPLICATION ON THE SOILLESS CULTURE***

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## ABSTRACT

*Grain filling is not ideal when AB Mix is used as a rice fertilizer in a soilless culture method because it causes a lengthy vegetative phase and a brief generative phase. The purpose of this study is to investigate the use of ABC Mix (AB Mix + Silica) to two functional rice varieties: Black Madrass and A2 Variety. A factorial Completely Randomized Design (CRD) including two factors and three replications, was used on the experimental design. The ABC Mix nutritional content (750-800 ppm, 1000-1050 ppm, 1250-1300 ppm, and 1500-1550 ppm) is the first factor, while the type of functional rice (black rice variety Black Madras and red rice variety A2) is the second. The results showed that the use of ABC mix 1000-1050 ppm on A2 red rice had a significant effect on the number of productive tillers (29.67 stems). The application of 1500-1550 ppm ABC mix showed a significant effect on the weight of 1000 grains (27.55 g), while the A2 red rice variety showed better performance based on plant height (86.64 cm). The silica content in ABC mix nutrients plays a role in strengthening plant tissue and increasing the efficiency of nutrient absorption so that it is directly able to increase the growth and yield of rice in the soilless culture system.*

**Keywords :** *ABC Mix, functional rice, soilless culture*