

The Effect of Applications of Types of PGPR and Planting Media Composition on the Successful Growth of Crystal Guava Shoot Cuttings (*Psidium guava* L.)

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ABSTRACT

Crystal guava has potential as an export fruit, but vegetative propagation is limited by root growth and the success rate of cuttings is low. The application of PGPR and the composition of the planting media encourage the successful growth of crystal guava shoot cuttings. The aim of the research was to examine the interaction between PGPR and the composition of the planting medium on the successful growth of crystal guava shoot cuttings. The research was carried out in March – July 2024 in the Greenhouse of the Faculty of Agriculture, UPN "Veteran" Yogyakarta. The research used a completely randomized factorial design. The first factor, PGPR with three levels, namely bamboo roots, alang - alang, and banana. The second factor, the composition of the planting medium with three levels, namely cocopeat: husk charcoal (50% : 50%), sawdust: manure (75% : 25%), and zeolite: husk charcoal (95% : 5%). Controls was shallot extract and soil: husk charcoal: manure (50% : 25% : 25%). Data were analyzed using analysis of variance, followed by the DMRT test at 5% level. Orthogonal contrast test at 5% level to determine differences in combination of treatment and control. The research results showed that there was no interaction between PGPR treatment and the composition of the planting media. There was no significant difference in the PGPR treatment for all parameters. The composition treatment of zeolite planting media: husk charcoal (95% : 5%) gave the best growth in terms of germination percentage, germination time, wet weight and dry weight. The treatment combination was not significantly different from the control.

Keywords: Crystal Guava, Cuttings, PGPR, Media