

EFFECT OF GROWING MEDIA COMPOSITION ON THE GROWTH OF TWO VARIETIES OF BUD SET SEEDLINGS OF SUGARCANE (*Saccharum officinarum* L.)

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ABSTRACT

*Sugarcane (*Saccharum officinarum* L.) is one of the important raw materials because it plays a crucial role in sugar and bioenergy production. Sugarcane is one of the quite important industrial crops in Indonesia. However, sugar imports in Indonesia experienced fluctuations in 2023. Increasing sugarcane production is very important to carry out as an effort to reduce white sugar import activities. The cause of the low domestic white sugar production is the low quality of seeds. The use of appropriate media can improve the growth, development, and health of sugarcane plants. The selection of the right varieties is very important to achieve optimal plant productivity and resilience. The combination of the Bud Set system and the right varieties is expected to significantly improve sugarcane seed growth. This research was conducted from June to August 2025. The experimental design used was a Factorial Completely Randomized Design (FCRD) consisting of two factors: Factor 1: Planting media treatment (M) – M1: sand : soil : compost (1 : 1 : 1), M2: sand : soil : compost (2 : 1 : 1), M3: sand : soil : compost (1 : 2 : 1), M4: sand : soil : compost (1 : 1 : 2). Factor 2: Varieties (V) with 2 levels, namely V1: BL and V2: HW. The data obtained were analyzed statistically using ANOVA. If there were significantly different treatments, they would be further tested using the BNT test at a 5% level. The research results showed that the M3 planting medium had a significantly different effect on the volume and shoot-root ratio parameters specifically at 62 DAP. The HW variety had a significantly different effect on plant height at 62 DAP, number of leaves at 20, 48, 62 DAP, and dry shoot weight, and had a very significantly different effect on the stem diameter at 20-62 DAP, clump weight, root length, and dry root weight.*

Keywords : composition, planting media, varieties.