

**The Effect Of Molasses Application And Composition Growing Media On  
The Growth Of Sugarcane (*Saccharum officinarum* L.) Variety Bululawang**

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***ABSTRACT***

Sugarcane (*Saccharum officinarum* L.) is a strategic crop for sugar production; therefore, improving early vegetative growth is essential to support final yield, particularly for the Bululawang variety. This study aimed to evaluate the effects of molasses concentration, growing media, and their interaction on the growth performance of Bululawang sugarcane seedlings. The experiment was conducted from September to November 2025 in Patokan Village, Situbondo District, Situbondo Regency, East Java, Indonesia. A factorial randomized block design (3×3) with three replications was used. The first factor was molasses concentration: P1 = 20% (100 mL per 500 mL water), P2 = 40% (200 mL per 500 mL water), and P3 = 60% (300 mL per 500 mL water). The second factor was growing media: T1 (goat manure:soil:sand = 1:1:1), T2 (cattle manure:soil:sand = 1:1:1), and T3 (filter cake/blotong:soil:sand = 1:1:1). Observed variables included plant height and stem diameter at 4, 8, and 12 weeks after planting (WAP), as well as number of tillers, total fresh biomass, and fresh root weight at 12 WAP. Data were analyzed using ANOVA followed by DMRT at 5% when significant. Molasses had a highly significant effect on plant height, stem diameter, total biomass, and fresh root weight, but not on tiller number. Growing media had a highly significant effect on plant height and stem diameter and a significant effect on tiller number, total biomass, and fresh root weight. The P×T interaction was significant only for plant height at 4 WAP and highly significant at 8 WAP. Overall, P1 (20% molasses) tended to produce the best growth and biomass. Medium T2 consistently improved stem diameter, total biomass, and fresh root weight, while the highest tiller number was obtained in T3.

**Keywords:** Planting Media, Molasses, Sugarcane Plant Growth