

**RESPON PERTUMBUHAN BIBIT TANAMAN TEBU
(*Saccharum officinarum* L.) DENGAN METODE *BUD SET* TERHADAP
LETAK MATA TUNAS DAN PEMBERIAN *ROOTONE-F***

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ABSTRAK

Tebu merupakan komoditas utama penghasil gula, namun produktivitasnya masih terkendala oleh kualitas bibit yang kurang optimal. Penelitian bertujuan untuk mengetahui pengaruh letak mata tunas dan pemberian Zat Pengatur Tumbuh *Rootone-F* terhadap pertumbuhan bibit tebu. Rancangan yang digunakan adalah Rancangan Petak Terbagi (*Split Plot Design*) 2 faktor dengan 4 kali ulangan. Petak utama yaitu pemilihan letak mata tunas: bagian atas, tengah dan bawah. Anak petak yaitu konsentrasi ZPT *Rootone-F*: 100, 200, 300, 400 ppm. Data dianalisis menggunakan *Analysis of Variance* (ANOVA) dan uji lanjut *Duncan's Multiple Range Test* (DMRT) taraf 5%. Hasil penelitian menunjukkan adanya interaksi antara letak mata tunas dan konsentrasi ZPT *Rootone-F* pada tinggi tanaman umur 70 HST, jumlah daun umur 28 HST, serta jumlah anakan umur 42 dan 56 HST. Mata tunas bagian atas memberikan hasil paling baik pada daya berkecambah, tinggi tanaman, dan jumlah daun umur 14 HST. Konsentrasi ZPT *Rootone-F* 200 ppm memberikan hasil yang paling baik pada jumlah daun umur 14 HST.

Kata Kunci: Tebu, Letak Mata Tunas, ZPT *Rootone-F*

**GROWTH RESPONSE OF SUGAR CANE SEEDLINGS
(*Saccharum officinarum* L.) USING THE *BUD SET* METHOD TO THE
POSITION OF THE SHOOT EYES AND THE APPLICATION OF
ROOTONE-F**

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ABSTRACT

Sugarcane is a major sugar-producing commodity, but its productivity is still hampered by suboptimal seedling quality. This study aimed to determine the effects of bud position and the application of the plant growth regulator Rootone-F on sugarcane seedling growth. A two-factor Split-Plot Design with four replications was used. The main plots involved the selection of bud position: upper, middle, and lower. The subplots were the concentrations of Rootone-F plant growth regulator: 100, 200, 300, and 400 ppm. Data were analyzed using Analysis of Variance (ANOVA) and Duncan's Multiple Range Test (DMRT) at the 5% significance level. The results indicated an interaction between bud position and Rootone-F concentration on plant height at 70 days after planting, number of leaves at 28 DAS, and number of tillers at 42 and 56 days after planting. The upper bud position yielded the best results for germination rate, plant height, and the number of leaves at 14 days after planting. A 200 ppm concentration of Rootone-F plant growth regulator produced the best results on 14 days after planting.

Keyword: Sugarcane, Bud Position, *Rootone-F* Plant Growth Regulator