

GROWTH OF KINALUN "KING" BANANA PLANLET SUBCULTURE ON VARIOUS CONCENTRATIONS OF SUCROSE AND THIAMINE *IN VITRO*

By : Nur Aini
Supervised by :Ari Wijayani

ABSTRACT

The need for quality banana plant seeds to improve raw materials for the banana industry is quite high, so in vitro culture is needed to produce quality seeds. This research aims to examine the interaction between sucrose and thiamin concentrations, determining the best sucrose and thiamin concentrations in subcultures of Kinalun plantain plantlets in vitro. This research was conducted at the Biotechnology Laboratory of UPN "Veteran" Yogyakarta using a two-factor Completely Randomized Design (CRD). The first factor was a sucrose concentration of 30, 35, and 40 g/l, while the second factor was a thiamin concentration of 8, 10, and 12 mg/l. Data analysis used the Anova test at 5% level and further tested with DMRT at 5% level. The results showed that the concentration of Sucrose 35g/l + Thiamin 10mg/l had an interaction on the fresh weight of plantlets. Sucrose concentrations of 30g/l and 35g/l are good concentrations for plant height, number of leaves, and root length. Sucrose concentrations of 35 g/l and 40 g/l are the best sucrose concentrations for the number of shoots. Thiamin concentrations of 8mg/l and 10mg/l are the best concentrations for plant height and root length.

Keywords: "King" of kinalun, Thiamine, Sucrose, Subculture