

IN VITRO GROWTH OF VANILLA (*Vanilla planifolia* Andrews.) MICRO CUTTING PLANLETS UNDER MEDIUM TYPES AND KINETINE CONCENTRATION.

By : Aisyah Rizta Oktaviana
Supervised by : Rina Srilestari

ABSTRACT

Vanilla is one of the plantation crop commodities that has high economic value. Indonesia has great potential in developing the vanilla business. One method that can be used in vanilla plant propagation is in vitro culture. This study aims to examine the interaction between the type of planting media and kinetin concentration, determine the most appropriate planting media, and the most appropriate kinetin concentration for vanilla microstems in vitro. The research was a laboratory experiment using a 2-factor completely randomized design (CRD). The first factor is the type of planting media consisting of MS (Murashige and Skoog), MSB (Murashige and Skoog + Vitamin B5), VW (Vacint and Went) media. The second factor was kinetin concentration consisting of 1, 2, and 3 mg/L. Observation data were analyzed using Analysis of Variance (ANOVA) at the 5% level and further tested with Duncan's Multiple Range Test (DMRT) at the 5% level. The results showed that there was an interaction between the treatment combination of planting media and kinetin concentration on the parameters of shoot growth time, planlet height, number of roots, root length, and planlet fresh weight. MS and MSB media treatments are the best media on the number of leaves parameter. All kinetin concentrations gave the same good results on vanilla planlet growth.

Keywords : *Microcutting, Vanilla, Medium types, Kinetin*