IN VITRO GROWTH OF VANILLA (*Vanilla planifolia* Andrews.) MICRO-CUTTING PLANLETS UNDER VARIOUS MURASHIGE AND SKOOG MEDIA AND *BENZYL ADENINE* VARIATIONS

By : Is Rohmanto
Suppervised by : Ari Wijayani and Rina Srilestari

ABSTRACT

The development of vanilla cultivation has great potential because its vanillin content is needed in the food and pharmaceutical industries. In vitro propagation of vanilla plants was carried out to get lot of seeds in a short time that have the same characteristics as the parent. This study aims to examine the interaction between MS media and BA, to obtain the best composition of MS media and BA concentrations on vanilla micro-cutting in vitro. The study was a laboratory experiment using a 2-factor Completely Randomized Design (CRD). The first factor is the variety of MS media at ½ MS, ¾ MS, and Full MS levels. The second factor was BA concentrations of 1 mg/l, 1.5 mg/l, and 2 mg/l. The data obtained was analyzed by *Analysis of Variance* (ANOVA) at 5% level and further tested by *Duncan's Multiple Range Test* (DMRT) at 5% level. The full MS and BA 2 mg/l treatments interacted with the number of shoots parameter and were not significantly different from the ½ MS and BA 1.5 mg/l treatments. The ¾ MS treatment was the best composition on plantlet fresh weight. BA concentration of 1 mg/l had the best growth of vanilla plantlets on root number.

Keywords: *Vanilla, In Vitro, Murashige Skoog, Benzyl Adenine*