GROWTH OF VANILLY PLANT MICRO-CUTTINGS (*Vanilla planifolia* Andrews) IN VARIOUS CONCENTRATIONS OF *NAPHTHALENE ACETIC ACID* AND *BENZYL ADENINE* IN VITRO

By : Ja'far Taufik Amin
Supervised by : Ari Wijayani

ABSTRACT

Vanilla plants are flavorful spice commodities that have great potential to be used in various fields. Vanilla propagation can be done in vitro to obtain uniform seedlings with the same characteristics as their parents. This study aims to determine the right concentration of NAA and BA on vanilla microstems in vitro. The research used laboratory experiments arranged in a completely randomized design (CRD) with 2 factors. The first factor was NAA concentration of 1 mg/l, 2 mg/l, 3 mg/l and the second factor was BA concentration of 1 mg/l, 1.5 mg/l, 2 mg/l. The data obtained were analyzed by *Analysis of Variance* (ANOVA) at 5% level and further tested with *Duncan's Multiple Range Test* (DMRT) at 5% level. NAA and BA treatments had interactions on planlet height with a combination of 3 mg/l + 1 mg/l, 2 mg/l + 1 mg/l, and 2 mg/l + 1.5 mg/l giving the best results. NAA concentrations of 2 mg/l and 3 mg/l gave the best growth on the number of shoots and fresh weight of planlets. BA concentration of 1 mg/l gave the best growth on the number of roots, root length, and fresh weight. BA 1.5 mg/l was good for the growth of the number of shoots, number of roots, and fresh weight. BA 2 mg/l was good for growth in shoot emergence time and number of shoots.

***Keywords**: Vanilla, Propagation, NAA, BA.*