

***GROWTH OF DRAGON FRUIT EXPLANTS (*Hylocereus polyrhizus*) ON
VARIOUS COMBINATIONS OF ZEATIN AND SUCROSE IN VITRO***

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ABSTRACT

Dragon fruit plant propagation can be done generatively and vegetatively, but to produce large quantities requires a long time, so tissue culture technology can be a solution to provide large quantities of seeds in a short time. This study aims to examine the interaction of zeatin and sucrose, as well as determine the proper concentration of zeatin and sucrose for the growth of dragon fruit shoots in vitro. The research is a laboratory experiment using a two-factor Completely Randomized Design (CRD). The first factor is the zeatin concentration of 3 ppm, 4 ppm, and 5 ppm, while the second factor is the sucrose concentration of 30 g/l, 40 g/l, and 50 g/l. Data were analyzed using Analysis of Variance (ANOVA) at a real level of 5%, followed by Duncan's Multiple Range Test (DMRT) at a level of 5%. The combination of 5 ppm Zeatin and 30 g/L Sucrose treatment is the right combination for the number of roots. The combination of 5 ppm Zeatin and 50 g/L sucrose treatment is the right combination when shoots appear. A zeatin concentration of 4 ppm is the right concentration, namely for the number of shoots. Sucrose administration at various concentrations produced the same response in percentage of survival, number of shoots, and root length.

Keyword : Dragon fruit, Zeatin, Sucrose, In vitro