

The Effect of Addition of Ambon Banana Fruit Extract and Several Concentrations of MS Media on Shoot Growth Vanilla (Vanilla Planifolia) In Vitro

Supervised by Rahmawati SP., MP

Elvina Tri Ramadhaningrum
Study Program of cultivation plantation crop
Majoring of Agricultural Production
e-mail: amadhaelvina3@gmail.com

ABSTRACT

Vanilla plant is one of the export crop commodities which is a contributor to the country's foreign exchange. This research is expected to replace the expensive in vitro culture medium, because it uses organic materials so that it can save costs with the best quality seeds. This study aims to determine the effect of adding Ambon banana fruit extract and several concentrations of the right MS medium on the growth of vanilla shoots by in vitro. This research was conducted at the Jember State Polytechnic Tissue Culture Laboratory from October to December 2019. This research was compiled using a factorial complete randomized design (RAL). The first factor is media concentration (1 MS and ½ MS), while the second factor is Ambon banana fruit extract (100 ml / L, 150 ml / L, 200 ml / L). Data were analyzed using ANOVA then further tested using DMRT 5%. The results showed that the addition of Ambon banana fruit extract had a very significant effect on the parameters of root length and number of roots. While the combination of ½ MS medium concentration and 100 ml ambon banana extract was the best treatment on the current parameters of shoots, plantlet height, and shoot height.

Key words: *Ambon banana fruit extract, MS media concentration, In Vitro*