

ABSTRACT

EFFECT OF BENZILADENINE AND KINETIN CONCENTRATIONS ON IN VITRO SHOOT MULTIPLICATION OF BANANA CV. AMBON KUNING

By

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Banana is nutritious because it has complete nutrients. One of the most marketable variety of banana is Ambon Kuning. Production of high quality banana has not been reached yet. This is mostly due to infestation of disease and minimum application of cultivation technology such as the use of tissue culture derived planting materials. This research aimed to investigate the effect of benziladenine (BA) and kinetin concentrations on in vitro shoot multiplication of banana cv. Ambon Kuning.

This research was done at Plant Science Laboratory, Department of Agronomy, Faculty of Agriculture, Lampung University from March to October 2010.

Treatments were factorially arranged in a completely randomized design with three replications. Two levels of BA concentrations (1 and 2 mg/l) combined with 4 levels of kinetin concentrations (0, 1, 2, and 4 mg/l) was employed. Each replication consisted of three culture bottles containing one explant. The homogeneity of data was tested using Barlett test. If the assumption were fulfilled

then analysis of variance is executed, and then followed by the least significant difference (LSD) test in 5 % alpha for mean separation.

The result of this research showed that: (1) the use of 2 mg/l BA produced greater number of buds and shoots, but resulted in shorter shoots with less roots compared to 1 mg/l BA; (2) the use of kinetin 1—2 mg/l increased total buds and shoot number, but when the concentration increased, the number of buds and shoots decreased; (3) combination of 2 mg/l BA and 1 mg/l kinetin was found to be the best for shoot multiplication, producing 7,17 shoots per exsplant, with the average length of 3.31 cm.