

**ABSTRACT**  
**IN VITRO SHOOT MULTIPLICATION OF BANANA CV. AMBON**  
**KUNING AS AFFECTED BY BENZYLADENINE**  
**AND INDOLE-3-ACETIC ACID**

**By**

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One method to propagate banana shoots in vitro is by used of axillary branching, in which shoots are stimulated to form and multiplied in existance of high ratio of cytokinin vs auxin in the system. The objections of this research were: (1) to study the effects of increasing benzyladenine (BA) concentrations on shoot multiplication (2) to study the effects of increasing indole-3-acetic acid (IAA) in combination with BA on shoot multiplication (3) to indentify if three was any interaction between BA and IAA in affectiny shoot multiplication, and (4) to find the best treatment which produced the highest number of shoots and propagules of banana cv. Ambon Kuning.

This Research was conducted at Plant Tissue Culture Laboratory, Faculty of Agriculture, The University of Lampung from January to July 2011. The experiment was conducted in a completely randomized design with three replications. Teratments were arranged in a faktorial design (3x3) with three level of BA (2, 4, and 6 mg/l) as the first factor and three level of IAA (0,5 and 1 mg/l) as the second factor. Each eksperimental unit consisted of three culture bottles

each of which contained one banana explant. Data on the number of shoots, number of propagules, number of leaves, plant height and length of roots were subjected to analysis of variance and if there was any significant F value, mean separation was done using least significant difference.

Result of the experiment showed that (1) increasing concentration of BA resulted in the increase of shoot and propagule numbers per explant. (2) Increasing concentration of IAA in combination with BA resulted in decreasing shoot and propagule numbers per explant. (3) There was interaction between BA and IAA in affecting shoot and propagule number per explant as well as number of leaves per explant. (4) the best treatment which produced the highest shoot and propagule number per explant was 6 mg/l BA without IAA.

Key words : benzyladenine (BA), indole-3-acetic acid (IAA),  
banana cv. Ambon Kuning