

Perbedaan Komposisi Media Induksi dan Regenerasi terhadap Perkembangan Kalus Padi (*Oryza sativa* L.) cv. Ciherang. *Effect of Medium Compositions on The Growth of Rice (*Oryza sativa* L. cv. Ciherang) Callus.* Advisor: Dr. Netty Ermawati, SP and Dr. Rizal, SP, MP.

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ABSTRACT

The efficiency of in-vitro regeneration of rice is specific, which means a suitable medium for the regeneration of one variety may not be similar to other varieties. In this study, eksplan was derived from sterile radical of Ciherang var. This experiment consist two steps. First, induction of callus, and the second step was callus regeneration. The formulation for calli induction consists of three levels, such as i_1 (2.4 D 2 ppm), i_2 (2.4 D 3 ppm + BAP 0.25 ppm + Casein Hydrolisate 300 ppm + Proline 600 ppm) and i_3 (2.4 D 2 ppm + Kinetin 0.5 ppm + Casein Hydrolisate 500 ppm + Proline 500 ppm) with N6 as a basic medium. Callus generated from those media then used in the next experiments for shoot regeneration which consists of two factors, the first factor was concentration of hormones BAP (r) (1 ppm, 2 ppm) and the second factor was concentration of the hormone Kinetin (k) (1 ppm, 2 ppm) with MS as a basic medium. The results showed that the highest embryogenic callus was obtained from i_3 treatment by 62,96%. The fastest rate of greeny callus and the emergence of shoots were found in $i_2r_2k_2$ and $i_2r_2k_1$ treatments. The results indicated that the media supplemented with high concentration of Kinetin (2 ppm) was more effective to induce the greeny of callus, and slightly lower concentration (1 ppm) leads to the formation of shoots.

Keywords: Ciherang, embryogenic calli, in-vitro, shoot regeneration, kinetin.