

**PERTUMBUHAN MIKROSTEK KENTANG (*Solanum tuberosum* L.)
PADA BERBAGAI KONSENTRASI MIO-INOSITOL DAN *BENZYL*
AMINO PURINE SECARA *IN VITRO***

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ABSTRAK

Kentang merupakan komoditas hortikultura penting di Indonesia, namun produktivitasnya masih rendah akibat keterbatasan bibit unggul. Kultur jaringan menjadi salah satu solusi perbanyak bibit kentang yang keberhasilannya dipengaruhi oleh komposisi media, termasuk mio-inositol dan *Benzyl Amino Purine*. Penelitian ini bertujuan untuk mengetahui apakah ada interaksi antara perlakuan mio-inositol dan BAP, serta konsentrasi mio-inositol dan BAP paling baik terhadap pertumbuhan mikrostek kentang. Penelitian dilaksanakan menggunakan Rancangan Acak Lengkap (RAL) dua faktor, yaitu konsentrasi mio-inositol (75; 100; dan 125 mg/L) serta BAP (0,5; 1; 1,5; dan 2 mg/L). Parameter yang diamati meliputi, persentase hidup, saat tumbuh tunas, tinggi planlet, jumlah tunas, jumlah dan warna daun, jumlah ruas, jumlah cabang, dan bobot segar planlet. Data yang diperoleh dianalisis menggunakan *Analysis of Variance* (ANOVA) pada taraf 5% dan diuji lanjut menggunakan *Duncan Multiple Range Test* (DMRT) pada taraf 5%. Hasil penelitian menunjukkan terdapat interaksi antara perlakuan macam konsentrasi mio-inositol dan BAP pada jumlah cabang planlet kentang. Perlakuan mio-inositol 100 mg/L dan 125 mg/L memberikan hasil terbaik pada parameter saat muncul tunas planlet kentang. Perlakuan BAP 1,5 mg/L dan 2 mg/L memberikan hasil terbaik saat muncul tunas planlet kentang.

Kata Kunci: *Kentang, mio-inositol, BAP, mikrostek, in vitro*

**GROWTH OF POTATO MICROCUTTINGS (*Solanum tuberosum* L.) AT
VARIOUS CONCENTRATIONS OF MYO-INOSITOL AND *BENZYL*
*AMINO PURINE IN VITRO***

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ABSTRACT

Potato is an important horticultural commodity in Indonesia; however, its productivity remains low due to the limited availability of high-quality seed tubers. Tissue culture is one of the alternative methods for potato propagation, and its success is influenced by the composition of the culture medium, including myo-inositol and Benzyl Amino Purine (BAP). This study aimed to determine the interaction between myo-inositol and BAP treatments, as well as the optimum concentrations of myo-inositol and BAP for the growth of potato microcuttings. The experiment was conducted using a two-factor Completely Randomized Design (CRD), consisting of myo-inositol concentrations (75, 100, and 125 mg/L) and BAP concentrations (0.5, 1, 1.5, and 2 mg/L). The observed parameters included survival percentage, shoot emergence time, plantlet height, number of shoots, number and color of leaves, number of nodes, number of branches, and fresh weight of plantlets. The data were analyzed using Analysis of Variance (ANOVA) at the 5% significance level and further tested using Duncan's Multiple Range Test (DMRT) at the 5% significance level. The results showed an interaction between myo-inositol and BAP concentrations on the number of branches of potato plantlets. Myo-inositol concentrations of 100 mg/L and 125 mg/L produced the best result in shoot emergence time of potato plantlets, while BAP concentrations of 1.5 mg/L and 2 mg/L produced the best result in shoot emergence time of potato plantlets

Keywords: Potato, myo-inositol, BAP, microcuttings, *in vitro*.