INDUKSI TUNAS STROBERI (*Fragaria* sp.) VARIETAS *SWEET CHARLIE* MENGGUNAKAN HORMON BAP (*6-Benzyl Amino Purin*) DAN IBA (*Indole-3-Butyric Acid*)

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ABSTRAK

Tanaman stroberi kaya akan nutrisi dan vitamin. Produksi tanaman stroberi cenderung mengalami penurunan sehingga membutuhkan kegitan impor untuk memenuhi kebutuhan dalam negeri. Selama ini perbanyakan stroberi dilakukan secara konvensional. Namun, perbanyakan secara konvensional mempunyai kekurangan yaitu lambatnya pertumbuhan tunas dan hasil bibit yang kurang steril. Perbanyakan secara kultur *in vitro* dengan bantuan ZPT (Zat Pengatur Tumbuh) BAP (*6-Benzyl Amino Purin*) dan IBA (*Indole-3-Butyric Acid*) sintetik membantu mempercepat pertumbuhan tanaman stroberi. Tujuan penelitian ini yaitu mengetahui pengaruh serta menentukan konsentrasi optimum kombinasi BAP dan IBA terhadap pertumbuhan tanaman stroberi varietas *Sweet Charlie*. Metode penelitian yang digunakan adalah eksperimen Rancangan Acak Lengkap (RAL). Perlakuan ZPT BAP dan IBA yang diberikan dengan konsentrasi masing-masing yaitu BAP 1,5 ppm, 2,0 ppm dan 2,5 ppm yang dikombinasikan dengan IBA 0,5 ppm, 1,0 ppm, 1,5 ppm dan 2,0 ppm, serta satu media tanpa perlakuan (BAP 0,0 ppm+IBA 0,0 ppm). Semua percobaan dilakukan sebanyak tiga kali ulangan. Pengamatan dilakukan setiap tiga hari sekali. Parameter pengamatan meliputi waktu muncul tunas, jumlah tunas, jumlah daun, persentase kelulushidupan planlet dan morfologi planlet. Data yang diperoleh diuji dengan uji Kruskal Wallis dan dilanjutkan dengan uji Kolmogorov-Smirnov (SPSS 25) pada taraf 5% (α 0,05). Hasil pengamatan menunjukkan bahwa terdapat pengaruh nyata di antara perlakuan BAP 0,0 ppm+IBA 0,0 ppm dengan kombinasi ZPT BAP dan IBA dalam menginduksi tunas tanaman stroberi varietas *Sweet Charlie*. Perlakuan BAP 1,5 ppm+IBA 1,0 ppm merupakan konsentrasi optimum pada seluruh parameter pengamatan yang menghasilkan rerata jumlah tunas 23,61 tunas selama 42 HST (Hari Setelah Tanam), rerata jumlah daun 6,55 helai selama 42 HST, rerata waktu awal muncul tunas yaitu 6,83 HST dan kelulushidupan planlet yang tinggi yaitu 100%.

Kata Kunci: BAP, IBA, Kultur *In Vitro*, Stroberi, Tunas

SHOOTS INDUCTION OF STRAWBERRY (*Fragaria* sp.) SWEET CHARLIE VARIETY USING BAP (*6-Benzyl Amino Purin*) AND IBA (*Indole-3-Butyric Acid*) HORMONE

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ABSTRACT

Strawberry plants are rich in nutrients and vitamins. Production of strawberry plants tends to decrease, requiring import activities to meet domestic needs. So far, the propagation of strawberries is done conventionally. However, conventional propagation has drawbacks, namely slow growth of shoots and less sterile seedlings. Propagation in vitro culture with the help of synthetic PGR (Plant Growth Regulators) BAP (*6-Benzyl Amino Purin*) and IBA (*Indole-3-Butyric Acid*) helps accelerate the growth of strawberry plants. The purpose of this study was to determine the effect and determine the optimum concentration of the combination of BAP and IBA on the growth of the Sweet Charlie variety strawberry plants. The research method used was a Completely Randomized Design (CRD) experiment. ZPT treatments BAP and IBA were given with respective concentrations namely BAP 1.5 ppm, 2.0 ppm and 2.5 ppm combined with IBA 0.5 ppm, 1.0 ppm, 1.5 ppm and 2.0 ppm, and one medium without treatment (BAP 0.0 ppm + IBA 0.0 ppm). All experiments were carried out three times with repetition. Observations were made every three days. Parameters observed included the time of shoot emergence, the number of shoots, the number of leaves, the percentage of plantlet survival and plantlet morphology. The data obtained was tested with the Kruskal Wallis test and continued with the Kolmogorov-Smirnov test (SPSS 25) at the 5% level (α 0.05). The results showed that there was a significant effect between the treatment of BAP 0.0 ppm + IBA 0.0 ppm with the combination of ZPT BAP and IBA in inducing the shoots of the Sweet Charlie variety of strawberry plants. The treatment of BAP 1.5 ppm + IBA 1.0 ppm was the optimum concentration for all observation parameters which resulted in an average number of shoots of 23.61 shoots for 42 DAP (Days After Planting), an average number of leaves of 6.55 during 42 DAP, the average time the first shoots appeared was 6.83 DAP and the plantlet survival rate was high, namely 100%.

Keywords: BAP, IBA, In Vitro, Strawberries, Shoots