

RINGKASAN

Kantong semar [*Nepenthes mirabilis* (Lour.) Druce] merupakan tanaman hias yang memiliki keunikan karena dapat membentuk kantong di ujung daunnya. *N. mirabilis* dikenal dengan produksi kantongnya banyak dengan warna dan bentuk yang bervariasi. Pengembangan *N. mirabilis* secara *in vitro* untuk *microfloriculture* memiliki potensi ekonomi yang menjanjikan. *N. mirabilis* yang membentuk kantong dalam kultur *in vitro* akan menjadi produk *microfloriculture* yang menarik dan diharapkan dapat menambah keunikan sehingga dapat menambah nilai jual produk. Penelitian ini dilakukan dengan tujuan untuk mengetahui pengaruh interaksi antara formulasi media dan konsentrasi BAP pada pembentukan kantong *N. mirabilis* secara *in vitro* serta menentukan formulasi media dan konsentrasi BAP yang paling baik untuk memacu pembentukan kantong pada *N. mirabilis* secara *in vitro*.

Penelitian ini dilaksanakan secara eksperimental dengan Rancangan Acak Lengkap (RAL) pola perlakuan faktorial. Faktor pertama adalah formulasi media yang terdiri atas *Full-Strength* MS (M1), *3/4-Strength* MS (M2), *2/4-Strength* MS (M3), dan *1/4-Strength* MS (M4). Faktor kedua adalah konsentrasi BAP yang terdiri atas 0 μM (B1); 0,5 μM (B2); 1,0 μM (B3); dan 1,5 μM (B4). Setiap kombinasi perlakuan dilakukan pengulangan sebanyak 3 kali sehingga diperoleh 48-unit percobaan. Variabel bebas yang dicobakan adalah formulasi media dan konsentrasi BAP. Variabel terikat yang diamati adalah pembentukan kantong *N. mirabilis*, dengan parameter yang diukur meliputi jumlah tunas, jumlah daun, waktu muncul kantong, jumlah kantong, dan persentase daun yang membentuk kantong. Data yang diperoleh dianalisis dengan *Analysis of Variance* (ANOVA) dengan probabilitas 5% dan 1% dan dilanjutkan dengan uji jarak berganda Duncan dengan tingkat kesalahan 5%. Hasil penelitian menunjukkan bahwa interaksi antara formulasi media dan konsentrasi BAP berpengaruh terhadap pertambahan jumlah daun, jumlah kantong yang terbentuk, dan persentase daun yang membentuk kantong pada *N. mirabilis* dalam kultur *in vitro*. Sementara pertambahan jumlah tunas dipengaruhi oleh faktor mandiri formulasi media dan konsentrasi BAP yang digunakan. Media *1/4-Strength* MS dengan penambahan 0,5 μM BAP merupakan media terbaik untuk memacu pembentukan kantong pada *N. mirabilis* dalam kultur *in vitro*.

Kata kunci: BAP, *in vitro*, kantong, MS, *Nepenthes mirabilis*.

SUMMARY

The pitcher plant (*Nepenthes mirabilis* (Lour.) Druce) is an ornamental plant with its unique pitchers at the tip of the leaf. *N. mirabilis* is well known for its large pitcher production various colours and shapes. In vitro development of *N. mirabilis* for microfloriculture posses promising economic potential. *N. mirabilis* that form pitchers in vitro will become an attractive microfloriculture product, which in turn will improve its uniqueness and increase its market value. This research has been conducted with a view to study the effect of the interaction between media formulation and BAP concentration on in vitro pitcher formation of *N. mirabilis*, as well as to determine the best media formulation and BAP concentration to induce in vitro pitcher formation of *N. mirabilis*.

This study has been carried out experimentally using a Completely Randomized Design (CRD) on a factorial treatment pattern. The first factor was the media formulations, which consisted of: Full-Strength MS (M1), 3/4-Strength MS (M2), 2/4-Strength MS (M3), and 1/4-Strength MS (M4). The second factor was the BAP concentrations consisted of: 0 μ M (B1); 0,5 μ M (B2); 1,0 μ M (B3); and 1,5 μ M (B4). Each treatment combination was repeated 3 times, which resulted in 48 experimental units. The independent variables tested were media formulations and BAP concentrations. The dependent variables observed were pitcher formation of *N. mirabilis*, with parameters measured including the number of shoots, number of leaves, time of pitcher emergence, number of pitchers, and the percentage of leaves forming pitchers. The data obtained were analyzed using an Analysis of Variance (ANOVA) at 5% and 1% probability levels, followed by Duncan's Multiple Range Test at a 5% error level. The results showed that the interaction between media formulation and BAP concentration controlled the increase in the number of leaves, number of pitchers, and the percentage of leaves forming pitchers of *N. mirabilis*. The number of shoots formed was determined by sole factor of media formulations and BAP concentrations. In addition, the pitcher emergence time was controlled by BAP concentration. The 1/4-Strength MS supplemented with 0,5 μ M BAP was the best media for in vitro pitcher formation of *N. mirabilis*. The research results showed that the interaction between media formulations and BAP concentration controlled leaf formation, number of pitchers formed and the percentage of pitcher forming leaves. Meanwhile, shoot formation was controlled by sole media formulations and BAP concentrations used. A 1/4-Strength MS supplemented with 0,5 μ M BAP resulted in the best pitcher formation of *N. mirabilis* in in vitro culture.

Keywords: BAP, in vitro, MS, *Nepenthes mirabilis*, pitcher.