INTISARI

Penelitian dilaksanakan di Laboratorium Kultur *In Vitro* Fakultas Pertanian Universitas Muhammadiyah Yogyakarta pada bulan April sampai Juni 2012. Tujuan dari penelitian ini untuk mendapatkan metode sterilisasi yang tepat untuk tunas tin (*Ficus carica* L) dan menentukan kombinasi BAP dan NAA untuk induksi tunas tin secara *in vitro*.

Penelitian optimasi sterilisasi disusun dalam Rancangan Acak Lengkap (RAL) dengan rancangan percobaan faktor tunggal 5 perlakuan. Perlakuan yang diujikan adalah perendaman dalam NaClO (0,1%; 5% selama 7 menit), fungisida dan bakterisida 4 g/L (5 menit, 30 menit, 1 jam, 2 jam, 3 jam). Setiap perlakuan diulang 3 kali. Parameter yang diamati adalah persentase eksplan *browning*, persentase eksplan terkontaminasi, jenis dan waktu kontaminasi dan persentase eksplan hidup. Penelitian induksi tunas disusun dalam Rancangan Acak Lengkap (RAL), faktor tunggal dengan 7 perlakuan. Perlakuan yang diujikan adalah penambahan BAP (0, 2, 4, 6 mg/L) dan NAA (0; 0,5; 1 mg/L) ke dalam medium MS yang mengandung GA_3. Setiap perlakuan diulang 6 kali. Parameter yang diamati adalah persentase eksplan terkontaminasi, persentase eksplan hidup, persentase pertumbuhan kalus, persentase pembentukan tunas, persentase eksplan *browning*, jumlah tunas, tinggi eksplan, jumlah daun, persentase eksplan berakar dan warna eksplan.

Hasil penelitian menunjukkan bahwa metode sterilisasi tunas tin yang paling baik yaitu dengan NaClO 10 %, 5' + NaClO 5 % 7' + fungisida dan bakterisida 4 g/L 3 jam dengan persentase eksplan hidup sebesar 100 % selama 30 hari pengamatan. Hasil kombinasi BAP 2 mg/L dan NAA 0,5 mg/L dalam medium MS yang mengandung GA_3 menunjukkan hasil terbaik pada peubah persentase pembentukan tunas (33,33 %), persentase eksplan browning (0,00 %), dan persentase warna eksplan (91,67 %).

Kata kunci: Tunas Tin (*Ficus carica* L), BAP (*6-benzylaminopurine*), NAA (*a-naftaleneasetat*), GA_3 (*giberellin acid*).

ABSTRACT

The research was conducted in the In Vitro Culture Laboratory, Faculty of Agriculture, University Muhammadiyah Yogyakarta, April to June 2012. The purpose of this research was to obtain the proper sterilization method for fig shoots (Ficus carica L) and determine the best combination of BAP and NAA for in vitro shoot induction of fig.

The optimizing sterilization research was arranged in completely randomized design (CRD), a single factor with 5 treatments. The treatments tested were dipping in NaClO (0.1%, 5% for 7 minutes), fungicide and bactericide 4 g / L (5 minutes, 30 minutes, 1 hour, 2 hours, 3 hours). Each treatment was repeated 3 times. Parameters measured were the percentage of explant browning, the percentage of contaminated explants, type and time of contamination and the percentage of live explants. Shoots induction research was arranged in completely randomized design (CRD), a single factor with 7 treatments. The treatments tested were the addition of BAP (0, 2, 4, 6 mg / L) and NAA (0, 0.5, 1 mg / L) to the MS medium containing GA_3. Each treatment was repeated 6 times. Parameters measured were the percentage of contaminated explants, the percentage of live explants, percentage of callus growth, percentage of bud formation, percentage of explants browning, number of shoots, height of explants, number of leaves, percentage of rooted explants and explant's color

The best results of fig shoot sterilization method was dipping explants in NaClO10%, 5' + NaClO 5%, 7' + fungicide and bactericide 4 g / L 3 hours with the percentage of survival explants 100% during 30 days of observation. The result of the combination of BAP 2 mg / L and NAA 0.5 mg / L showed the best results for variable : percentage of shoot formation (33.33%), the explant browning (0.00%), and the percentage of explant's color (91.67%).

Keywords: Fig shoot (*Ficus carica* L), BAP (6-*benzylaminopurine*), NAA (a-*naftaleneasetat*), GA_3 (*giberellin acid*).