KURNIA WULANDARI. Pertumbuhan Mikrostek Planlet Tanaman Tin (*Ficus carica* L.) dengan Penambahan Kinetin dan *Naphthalene Acetic Acid* (NAA) secara *In Vitro*. Dibawah bimbingan BASUKI dan RINA SRILESTARI.

ABSTRAK

Tanaman tin merupakan tanaman penghasil buah yang tergolong jarang dibudidayakan di Indonesia karena cukup sulit dan memakan waktu lama jika dibudidayakan secara konvensional. Buah tin mengandung zat gizi dan manfaat yang melimpah sehingga perlu dilakukan perbanyakan tanaman tin guna memenuhi kebutuhan buah tin di Indonesia. Teknik kultur *in vitro* merupakan salah satu metode yang dapat digunakan untuk perbanyakan tanaman tin. Penelitian bertujuan untuk menentukan interaksi antara Kinetin dan *Naphthalene Acetic Acid* (NAA) serta menentukan konsentrasi Kinetin dan *Naphthalene Acetic Acid* (NAA) yang paling baik terhadap pertumbuhan mikrostek planlet tanaman tin. Penelitian dilaksanakan di Laboratorium Bioteknologi Fakultas Pertanian, Universitas Pembangunan Nasional "Veteran" Yogyakarta pada bulan Juni sampai September 2019. Metode penelitian disusun dalam Rancangan Acak Lengkap (RAL) dua faktor. Faktor pertama adalah konsentrasi kinetin terdiri atas 3 taraf yaitu Kinetin 1 mg/l, 2 mg/l, 3 mg/l, faktor kedua adalah konsentrasi NAA terdiri atas 3 taraf yaitu 0,3 mg/l, 0,5 mg/l, dan 0,7 mg/l. Setiap percobaan diulang sebanyak 3 kali. Data pengamatan dianalisis menggunakan sidik ragam (ANOVA) pada taraf α 5% dilanjutkan dengan Uji Jarak Berganda Ducan (DMRT) pada taraf α 5 %. Hasil penelitian menunjukkan ada interaksi pada kombinasi perlakuan konsentrasi Kinetin 1 mg/l dan NAA 0,5 mg/l pada parameter jumlah tunas dan tinggi planlet. Konsentrasi Kinetin 1 mg/l mempercepat saat tumbuh tunas, menghasilkan jumlah daun terbanyak, bobot segar dan bobot kering planlet tertinggi. Konsentrasi NAA 0,5 mg/l dan 0,7 mg/l menghasilkan saat tumbuh tunas tercepat. Konsentrasi NAA 0,3 mg/l menghasilkan bobot segar planlet dan bobot kering planlet tertinggi

Kata kunci: mikrostek, tin, *in vitro* Kinetin, dan NAA

KURNIA WULANDARI. Growth of Micro Cuttings Planlet Tin (*Ficus carica* L.) with Addition of Kinetin and Naphthalene Acetic Acid (NAA) by In Vitro. Supervised by Basuki and Rina Srilestari.

ABSTRACT

Tin is a type of plant that produces fruit. Tin plants are rarely cultivated in Indonesia because they are quite difficult through conventional crop cultivation. Figs contain many nutrients and benefits, therefore it is necessary to multiply tin plants for nutritional needs in Indonesia. In vitro culture is one method can be used for the multiplication of tin plants. The study aims to determine the interaction between Kinetin and Naphthalene Acetic Acid (NAA) and determine the best concentration of Kinetin and Naphthalene Acetic Acid (NAA) which can support planlet tin micro cutting growth. The research was conducted at the Biotechnology Laboratory of the Faculty of Agriculture, Yogyakarta "Veteran" National Development University from June to 2019. The research methods were arranged in a two factor Randomized Completely Design. The first factor is the concentration of Kinetin consisting of 3 levels that is Kinetin 1 mg / l, 2 mg / l, 3 mg / l, the second factor is the concentration of NAA consisting of 3 levels that is NAA 0,3 mg / l, 0,5 mg / l, and 0,7 mg / l. Each experiment was repeated 3 times. Observation data were analyzed using variance (ANOVA) and if a significant effect existed, it would be followed by Ducan Multiple Range Test (DMRT) at α level of 5%. The results an interaction in the treatment combination of Kinetin concentration of 1 mg / l and NAA 0.5 mg / l on the parameters of the number of shoots and height of the planlet. Kinetin concentration of 1 mg / l gives the best result on the parameters growing buds, number of leaves, fresh weight and highest dry weight of planlets. NAA concentrations of 0.5 mg / l and 0.7 mg / l produce the fastest growing shoots. NAA concentration of 0.3 mg / l produced the highest fresh weight and highest dry weight

Keywords: micro cutting, tin, *in vitro* Kinetin, dan NAA