

ABSTRACT

Duku (*Lansium domesticum* Corr.) is one of the typical Indonesian plants found in the South Sumatra region which has seasonal fruit. Cultivation of duku plants has several obstacles, so in vitro propagation through tissue culture techniques is needed. This research was conducted from September 2 – November 29, 2022 at the Integrated Laboratory of Raden Fatah State Islamic University Palembang Tissue Culture room. This type of research is quantitative descriptive research design of Completely Randomized Design (CRD) with 5 treatments and 5 repetitions using a combination of growth regulators, namely 0 ppm 2,4-D + 0 ppm BAP; 1 ppm 2,4-D + 1 ppm BAP; 1 ppm 2,4-D + 2 ppm BAP; 1 ppm 2,4-D + 3 ppm BAP; 1 ppm 2,4-D + 4 ppm BAP. This study aims to determine the response of callus formation from explants of duku leaf stalk and bone to the combination of various concentrations of growth regulator 2,4-D and BAP. Explants were cultured on *Murashige and Skoog* (MS) media with 30 g sucrose and 8 g agar for 28 days. The results showed that on day 28 the explants only showed swelling response and no callus was formed.

Keywords: Callus Induction, *Lansium domesticum* Corr., Petiole and Leaf Bone, Growth Regulators

ABSTRAK

Duku (*Lansium domesticum* Corr.) salah satu tanaman khas Indonesia yang banyak ditemukan di daerah Sumatera Selatan yang berbuah musiman. Budidaya tanaman duku memiliki beberapa kendala, sehingga diperlukan perbanyakannya secara *in vitro* melalui teknik kultur jaringan. Penelitian ini dilakukan mulai dari 2 September – 29 November 2022 di Laboratorium Terpadu Universitas Islam Negeri Raden Fatah Palembang ruang *Tissue Culture*. Jenis penelitian ini yaitu penelitian deskriptif kuantitatif dengan desain penelitian Rancangan Acak Lengkap (RAL) dengan 5 perlakuan dan 5 pengulangan menggunakan kombinasi zat pengatur tumbuh yaitu 0 ppm 2,4-D + 0 ppm BAP; 1 ppm 2,4-D + 1 ppm BAP; 1 ppm 2,4-D + 2 ppm BAP; 1 ppm 2,4-D + 3 ppm BAP; 1 ppm 2,4-D + 4 ppm BAP. Penelitian ini bertujuan untuk mengetahui respon pembentukan kalus dari eksplan tangkai dan tulang daun duku terhadap kombinasi berbagai konsentrasi zat pengatur tumbuh 2,4-D dan BAP. Eksplan dikultur pada media *Murashige and Skoog* (MS) dengan 30 g sukrosa dan 8 g agar-agar selama 28 hari. Hasil penelitian menunjukkan bahwa pada hari ke 28 eksplan hanya menunjukkan respon pembengkakan dan belum terbentuk kalus.

Kata kunci: Induksi Kalus, *Lansium domesticum* Corr., Tangkai dan Tulang Daun, Zat Pengatur Tumbuh