ABSTRAK

Rizki Rahmat Sonjaya. 2023. Respon Viabilitas Benih Kakao (*Theobroma cacao* L .) Var. DRC 15 Terhadap Konsentrasi Dan Lama Perendaman Giberelin (GA_3). Dibawah bimbingan Esty Puri Utami dan Ida Yusidah.

Tanaman kakao (*Theobroma cacao* L.) memiliki peran strategis dalam perekonomian Indonesia, khususnya melalui perkebunan rakyat. Namun, produktivitas perkebunan kakao rakyat menghadapi tantangan, seperti tanaman yang sudah tua, kurang produktif, pemahaman budidaya yang rendah, dan masalah kualitas bibit yang kurang memadai. Salah satu solusi yang diusulkan adalah penggunaan varietas DRC 15 yang unggul serta penerapan perlakuan konsentrasi dan lama perendaman GA_3 untuk meningkatkan viabilitas benih dan pertumbuhan benih. Upaya ini diharapkan dapat mendukung peningkatan kualitas bibit kakao yang akan berkontribusi pada pertumbuhan ekonomi nasional melalui sektor perkebunan kakao. Percobaan dilakukan di Balai Pengembangan dan Produksi Benih Perkebunan (BPPBP) Jawa Barat. Metode yang digunakan pada penelitian ini yaitu Rancangan Acak Kelompok dengan 2 perlakuan dan 3 ulangan. Perlakuan pertama yaitu: Pemberian konsentrasi GA_3 = Tanpa konsentrasi GA_3 (g0), konsentrasi GA_3 20 ppm (g1), konsentrasi GA_3 40 ppm (g2), konsentrasi GA_3 60 ppm (g3). Perlakuan kedua yaitu: Lama perendaman = lama perendaman 2 jam (a1), lama perendaman 4 jam (a2), lama perendaman 6 jam (a3). Hasil penelitian menunjukkan bahwa tidak terdapat interaksi pada pemberian konsentrasi dan lama perendaman GA_3 terhadap semua parameter penelitian. Pemberian konsentrasi GA_3 sebesar 20 ppm efektif dalam meningkatkan diameter batang. Selain itu, lama perendaman selama 4 jam efektif dalam meningkatkan daya tumbuh dan panjang akar tanaman kakao varietas DRC 15.

Kata Kunci : Viabilitas Benih, Kakao, Varietas DRC 15, Konsentrasi GA_3, Priming.

ABSTRACT

Rizki Rahmat Sonjaya. 2023. Viability Response Of Cocoa Seeds (*Theobroma cacao* L.) Var. Drc 15 To Gibberellin Acid (GA_3) Concentration And Priming. Supervised by Esty Puri Utami and Ida Yusidah.

Cocoa plants (*Theobroma cacao* L.) play a strategic role in Indonesia's economy, particularly through smallholder plantations. However, the productivity of smallholder cocoa plantations faces challenges such as aging unproductive plants, low cultivation knowledge, and issues with inadequate seed quality. One proposed solution is the use of the superior DRC 15 cocoa variety along with the application of concentration and priming GA_3 treatments to enhance seed viability and seedling growth. These efforts are expected to support the improvement of cocoa seedling quality, contributing to the national economy's growth through the cocoa plantation sector. The experiment was conducted at the Plantation Seed Development and Production Center (BPPBP) in West Java. The research employed a Randomized Complete Block Design with two treatments and three replications. The first treatment involved Gibberellic Acid (GA_3) concentrations: No GA_3 concentration (g0), GA_3 concentration of 20 ppm (g1), GA_3 concentration of 40 ppm (g2), and GA_3 concentration of 60 ppm (g3). The second treatment focused on soaking duration: 2 hours of priming (a1), 4 hours of priming (a2), and 6 hours of priming (a3). The research results indicate that there was no interaction between the application of concentration and priming GA_3 on all research parameters. The application of 20 ppm GA_3 concentration was effective in increasing stem diameter. Additionally, priming for 4 hours proved to be effective in enhancing the growth capacity and root length of the DRC 15 cocoa plant variety.

Keywords: Viability of Seeds, Cocoa, DRC 15 Variety, GA3 Concentration, Priming.