

**PENGARUH BERBAGAI KONSENTRASI GIBERELIN (GA₃)
TERHADAP DAYA GERMINASI, PERTUMBUHAN DAN PRODUKSI
BIOMASSA PADA HIJAUAN KATUK (*Sauropus androgynus*)**

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INTISARI

Penambahan zat pengatur tumbuh berupa hormon giberelin (GA₃) dilakukan guna mengatasi permasalahan budidaya stek batang katuk yang sulit tumbuh dan pembentukan tunas yang cukup lama. Penelitian ini dilakukan dengan lima perlakuan uji yang terdiri dari lima konsentrasi perendaman stek yang berbeda untuk mengetahui efek konsentrasi hormon giberelin terhadap tanaman katuk dan satu kontrol. Penelitian ini menggunakan rancangan acak lengkap pola searah. Konsentrasi GA₃ (G) terdiri dari 6 taraf yaitu 0 ppm, 100 ppm, 200 ppm, 300 ppm, 400 ppm, dan 500 ppm dengan perendaman stek selama 18 jam. Data dianalisis ANOVA dan perbedaan antar perlakuan diuji dengan Duncan Multiple Range Test pada tingkat signifikansi 5%. Hasil penelitian menunjukkan bahwa perlakuan perendaman giberelin (100 ppm, 200 ppm, 300 ppm, 400 ppm, dan 500 ppm) selama 18 jam berpengaruh nyata ($P < 0,05$) terhadap daya germinasi stek katuk, diameter batang, produksi segar batang, produksi kering daun, dan produksi kering batang tanaman katuk. Pemberian giberelin berpengaruh tidak nyata ($P > 0,05$) terhadap tinggi tanaman, panjang tanaman, jumlah daun, produksi segar daun, produksi bahan organik daun, produksi bahan organik batang tanaman katuk. Berdasarkan penelitian dapat disimpulkan bahwa perlakuan perendaman giberelin 100 ppm efektif dalam meningkatkan daya kecambah, meningkatkan tinggi tanaman, produksi bahan kering daun dan bahan organik batang. Pemberian giberelin dengan konsentrasi lebih dari 300 ppm dapat menurunkan produktivitas tanaman katuk.

Kata kunci: Giberelin, *Sauropus androgynus*, Zat Pengatur Tumbuh.

EFFECT OF VARIOUS CONCENTRATIONS OF GIBBERELIC ACID (GA₃) ON GERMINATION, GROWTH, AND BIOMASS PRODUCTION IN KATUK PLANT (*Sauropus androgynus*)

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ABSTRACT

The addition of growth regulators in the form of gibberellic acid (GA₃) was carried out to overcome the problem of cultivating *Sauropus androgynus* stem cuttings that are difficult to grow and the formation of shoots is quite long. This study was conducted with five test treatments consisting of five different concentrations of cuttings soaking to determine the effect of gibberellic acid concentration on *Sauropus androgynus* and one control. This study used a complete randomized design in a unidirectional pattern. Gibberellic acid concentration (G) consists of 6 levels, namely 0 ppm, 100 ppm, 200 ppm, 300 ppm, 400 ppm, and 500 ppm with soaking cuttings for 18 hours. Each was repeated as many as 5 replicates. Data were analyzed by ANOVA and differences between treatments were tested by Duncan Multiple Range Test at 5% significance level. The results showed that gibberellic acid soaking treatment (100 ppm, 200 ppm, 300 ppm, 400 ppm, and 500 ppm) for 18 hours had a significant effect ($P < 0.05$) on germination, stem diameter, fresh stem production, dry leaf production, and dry stem production of *Sauropus androgynus*. Gibberellic acid application had no significant effect ($P > 0.05$) on plant height, plant length, number of leaves, fresh leaf production, leaf organic matter production, stem organic matter production of cotton plants. Based on the research, it can be concluded that 100 ppm gibberellic acid treatment is effective in increasing germination, increasing plant height, dry matter production of leaf and organic matter of stem. Gibberellic acid application with a concentration of more than 300 ppm can reduce the productivity of *Sauropus androgynus*.

Keywords: Gibberellic acid, *Sauropus androgynus*, Growth Regulators.