PENGARUH EKSTRAK AIR RIMPANG KENCUR (*Kaempferia galanga*) TERHADAP PERTUMBUHAN TANAMAN CABAI MERAH BESAR (*Capsicum annuum* L)

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ABSTRAK

Tujuan penelitian ini adalah untuk mengetahui apakah ekstrak air rimpang kencur (*Kaempferia galanga*) mempengaruhi pertumbuhan tanaman cabai merah besar (*Capsicum annuum* L) . Penelitian ini dilaksanakan dari bulan Juni sampai Juli 2016 di Laboratorium Fisiologi Tumbuhan, Jurusan Biologi, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Lampung. Variabel dalam penelitian ini adalah tinggi, berat segar, berat kering, kadar air relatif, kandungan klorofil a, b dan total tanaman cabai merah. Penelitian dilaksanakan dalam Rancangan Acak Lengkap dengan faktor utama ekstrak air rimpang kencur yang terdiri dari 5 taraf konsentrasi 0% v/v (kontrol), 25% v/v, 50% v/v, 75% v/v, dan 100% v/v. Analisis ragam dan uji BNT dilakukan pada taraf nyata 5%. Hasil penelitian menunjukkan bahwa ekstrak air rimpang kencur berkorelasi linear negatif dengan tinggi tanaman ($y = - 0,05x + 11,152$ $R^2 = 0,9816$), dengan berat segar tanaman ($y = - 0,2298x + 71,92$ $R^2 = 0,9065$), serta dengan berat kering tanaman ($y = - 0,1019x + 28,66$ $R^2 + 0,9349$). Tidak ada efek ekstrak air rimpang kencur terhadap kadar air relatif serta kandungan klorofil a, b dan total. Penurunan tinggi dan berat segar terjadi pada konsentrasi 50% v/v, sedangkan penurunan berat kering terjadi pada konsentrasi 25% v/v. Disimpulkan bahwa ekstrak air rimpang kencur bersifat allelopati terhadap tanaman cabai merah yaitu menghambat pertumbuhan cabai merah.

Kata Kunci: *Capsicum annuum, Kaempferia galanga,* tinggi, berat segar, berat kering, kadar air relatif, kandungan klorofil total

ABSTRACT

The purpose of this study was to determine whether the aqueous extract of greater rhizome (*Kaempferia galanga*) affect the growth of red pepper plant (*Capsicum annuum* L). The research was conducted from June to July 2016 in the Laboratory of Plant Physiology, Department of Biology, Faculty of Mathematics and Natural Sciences, University of Lampung. The variables in this study were plant height, plant fresh weight, plant dry weight, relative water content, chlorophyll total. The experiment was conducted in a completely randomized design with main factors the aqueous extract of greater rhizome consisting of five concentration level of 0% v / v (control), 25% v / v, 50% v / v, 75% v / v, and 100% v / v. Analysis of variance and LSD test was performed at 5% significance level. The results showed that the aqueous extract of greater rhizome has negative linear correlation with plant height ($y = - 0,05x + 11.152$ $R^2 = 0.9816$), with a fresh weight of the plants ($y = - 0,2298x + 71.92$ $R^2 = 0.9065$), as well as the plant dry weight ($y = - 0,1019x$ 28.66 + R^2 + 0.9349). No effect of the aqueous extract of greater rhizome on the relative water content and total chlorophyll content. Decrease in height and fresh weight occurred at a concentration of 50% v / v, while the reduction in dry weight occurred at a concentration of 75% v / v. It was concluded that the aqueous extract of greater rhizome is allelopathic against red pepper plant that inhibits the growth of red pepper.

Keywords: ***Capsicum annuum, Kaempferia galanga,*** **height, fresh weight, dry weight, relative water content, chlorophyll total.**