

ABSTRACT

THE EFFECT OF GIVING MSG (*Monosodium Glutamate*) ON THE GROWTH OF ONION BULBS (*Allium cepa L.*)

By

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MSG is glutamate acid which contains many elements of N (Nitrogen), P (Phosphorus), K (Potassium), and there is also the content of Na (Sodium) which can stimulate plant growth. The purpose of this study was to determine the effect of MSG (Monosodium Glutamate) solution on the growth of onion bulbs (*Allium cepa L.*). This research was conducted at the Botanical Laboratory of Biology, Faculty of Mathematics and Natural Sciences, University of Lampung from November-December 2018. The study was conducted using a Completely Randomized Design (CRD), using MSG as a single factor with several levels of concentration: 0% (control), 5%, 10%, and 15% as treatment. The treatment was carried out with five replications so that 20 experimental units were obtained. The variables in this study were the number of shoots, number of leaves, leaf dry weight, and chlorophyll a content, chlorophyll b, and total chlorophyll. Variety homogeneity was determined based on the Levene test, then an analysis of

variance was carried out at the level of 5%, if there were differences between treatments then a further test was carried out with the LSD test at the 5% level. The results showed that MSG solution had an effect on the growth of onion bulbs, the effect of which was evident in the variables of chlorophyll a and total while the other variables had the same effect. The administration of 10% MSG solution which effectively affects the growth of onion bulbs.

Keywords: Onion, MSG, and Shoot growth.

ABSTRAK

PENGARUH PEMBERIAN MSG (*Monosodium Glutamate*) TERHADAP PERTUMBUHAN UMBI BAWANG MERAH (*Allium cepa L.*)

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MSG merupakan asam glutamat yang banyak mengandung unsur N (Nitrogen), P (Fosfor), Kalium (K), serta terdapat juga kandungan Na (Natrium) yang dapat merangsang pertumbuhan tanaman. Tujuan penelitian ini adalah untuk mengetahui pengaruh larutan MSG (*Monosodium Glutamate*) terhadap pertumbuhan umbi bawang merah (*Allium cepa L.*). Penelitian ini dilakukan di Laboratorium Botani jurusan Biologi Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Lampung dari bulan November-Desember 2018. Penelitian dilaksanakan dengan menggunakan Rancangan Acak Lengkap (RAL), menggunakan MSG sebagai faktor tunggal dengan beberapa taraf konsentrasi : 0% (kontrol), 5%, 10%, dan 15% sebagai perlakuan. Perlakuan dilakukan dengan lima kali ulangan sehingga didapatkan 20 satuan percobaan. Variabel dalam penelitian ini adalah jumlah tunas, jumlah daun, berat kering daun, dan kandungan klorofil a, klorofil b, dan klorofil total. Homogenitas ragam ditentukan

berdasarkan uji Levene, kemudian dilakukan *Analisis Of Variance* pada taraf 5%, apabila ada perbedaan antar perlakuan maka dilakukan uji lanjut dengan uji BNT pada taraf nyata 5%. Hasil penelitian menunjukkan larutan MSG memberikan pengaruh terhadap pertumbuhan umbi bawang merah, pengaruh yang terlihat nyata terdapat pada variabel klorofil a dan total sedangkan variabel lainnya memberikan pengaruh yang sama. Pemberian larutan MSG konsentrasi 10% yang efektif mempengaruhi pertumbuhan umbi bawang merah.

Kata Kunci : Bawang Merah, MSG, dan Pertumbuhan tunas.