

ABSTRAK

Lamrumenta Asa Lamrouli, NIM 4172220008 (2024). Ekspresi Fenotip Bawang Putih (*Allium sativum* L.) Kultivar Doulu Generasi MV4 yang Diradiasi Sinar Gamma.

Tujuan penelitian ini adalah untuk mengetahui ekspresi fenotip bawang putih generasi MV₄ mutan bawang putih kultivar Doulu. Penelitian ini dilaksanakan bulan Februari 2021 – Juni 2021 di Balai Penelitian Tanaman Sayuran, Desa Tongkoh, Berastagi, Sumatera Utara dan Laboratorium Biologi Universitas Negeri Medan. Bibit yang digunakan dalam penelitian ini adalah bawang putih MV₃ perbanyak bawang putih Doulu yang ditanami kembali. Rancangan yang digunakan adalah Rancangan Acak Kelompok dengan empat kali ulangan. Data kuantitatif yang diperoleh dianalisis menggunakan ANOVA one way dengan uji lanjut Beda Nyata Jujur (BNJ). Data Kualitatif yang diperoleh dianalisis secara deskriptif. Parameter yang diamati ialah umur tumbuh, tinggi tanaman, jumlah daun, diameter batang, diameter umbi, berat umbi, jumlah siung, berat siung, kepadatan daun, warna daun, struktur umbi dan bentuk umbi. Ekspresi Fenotip bawang putih kultivar Doulu generasi MV₄ yaitu tinggi tanaman 60-70 cm, jumlah daun 7 helai, diameter batang 0,8 cm, diameter umbi berkisar 30-37 mm dengan berat umbi 9-14 gr, jumlah siung berkisar 9-12 siung dengan berat siung 0,8-1 gr. Orientasi kepadatan rendah (low) warna daun Moderate Yellowish Green (hijau), struktur umbi *Regular two fan groups, Irregular, Regular multi-fan groups, Regular quadruple, dan Regular multi cloved radial, regular two cloved* dengan bentuk umbi yaitu *Broad Oval, Globe, Flat Globe, Rhomboid, dan Broad Elliptic*.

Kata kunci: Bawang putih, Sinar Gamma, Generasi MV₄, Kultivar Doulu, Fenotip



ABSTRACT

Lamrumenta Asa Lamrouli, NIM 4172220008 (2024). Phenotypic Expression of Garlic (*Allium sativum* L.) Doulu Cultivar Generation MV4 Irradiated with Gamma Rays.

The aim of this study was to determine the phenotypic expression of the MV4 generation garlic mutant cultivar Doulu. This research was carried out in February 2021 – June 2021 at the Vegetable Crops Research Institute, Tongkoh Village, Berastagi, North Sumatra and the Biology Laboratory of Medan State University. The seeds used in this research were MV3 garlic propagated by Doulu garlic which was replanted. The design used was a Randomized Block Design with four replications. The quantitative data obtained were analyzed using one way ANOVA with a follow-up Honestly Significant Difference (BNJ) test. The qualitative data obtained was analyzed descriptively. The parameters observed were growth age, plant height, number of leaves, stem diameter, tuber diameter, tuber weight, number of cloves, clove weight, leaf density, leaf color, tuber structure and tuber shape. Phenotype expression of the Doulu cultivar MV4 generation of garlic, namely plant height 60-70 cm, number of leaves 7, stem diameter 0.8 cm, bulb diameter around 30-37 mm with tuber weight 9-14 grams, number of cloves around 9-12 cloves with a clove weight of 0.8-1 gr. Low density orientation (low) leaf color Moderate Yellowish Green (green), tuber structure Regular two fan groups, Irregular, Regular multi-fan groups, Regular quadruple, and Regular multi cloved radial, regular two cloved with tuber shapes, namely Broad Oval, Globe, Flat Globe, Rhomboid, and Broad Elliptic.

Key words: Garlic, Gamma Rays, MV4 Generation, Doulu Cultivar, Phenotype

