

ABSTRAK

Wandes Sanbara Nainggolan, NIM 4162220009 (2020), Fenotipik Mutan Bawang Putih (*Allium sativum* L.) cv. Doulu Generasi MV₃ Hasil Seleksi Berdasarkan Bobot Siung yang Diradiasi Sinar Gamma.

Penelitian ini bertujuan untuk mengetahui fenotipik bawang putih kultivar Doulu generasi MV₃ yang diseleksi berdasarkan berat siung. Penelitian ini dilaksanakan di Balai Penelitian Tanaman Sayuran, Desa Tongkoh, Berastagi, Sumatera Utara pada bulan Februari – Juni 2020. Populasi penelitian dalam penelitian ini adalah bawang putih kultivar Doulu generasi MV₃ yang memiliki berat siung diatas 1,5 gram yang ditanam di Balai Penelitian Tanaman Sayuran Tongkoh. Penelitian ini menggunakan 231 tanaman bawang putih. Penanaman umbi dilakukan di Balai Penelitian Tanaman Sayuran, Desa Tongkoh, Berastagi, Sumatera Utara pada (Februari 2020). Rancangan yang digunakan adalah *nested design* dengan teknik penanaman *ear to row* Parameter yang diamati ialah umur tumbuh, tinggi tanaman, jumlah daun, diameter umbi, berat umbi, jumlah siung, diameter siung, berat siung, orientasi daun, warna daun, struktur umbi, warna siung, dan bentuk umbi. Fenotipik bawang putih Doulu Generasi MV₃ ialah orientasi daun *low* (rendah), warna daun *Group Green* (hijau), warna siung putih dengan warna keunguan pada pangkal siung, memiliki bulbil pada bagian batang. Tinggi tanaman 60-70 cm, jumlah daun 7-8 helai, Diameter batang 0,8 cm, struktur umbi yaitu *Regular two-fan groups*, *Regular multi-cloved*, *Regular quadruple*, *Irregular*, *Regular two-cloved*, *Irregular*. Bentuk umbi bawang putih Doulu yaitu *Flat Globe*, *Broad oval*, *Rhomboid*, *Broad Elliptic*, dan *Globe*. Bobot umbi berkisar 12-16 gr dengan diameter 30-33 mm dan bobot siung berkisar antara 1,2-1,7 gr dengan diameter 10-13 mm.

Kata Kunci: Fenotipik, Kultivar, Genotipe.

ABSTRACT

Wandes Sanbara Nainggolan, NIM 4162220009 (2020), Phenotypic of Garlic Mutants (*Allium sativum* L.) cv. Doulu Generation MV₃ Results Based on Selection on Weight of Clove Radiated by Gamma Rays.

This study aims to determine the phenotypic of cultivated garlic cultivar Doulu generation of MV₃ based on the weight of the cloves. This research was conducted at the Vegetable Research Institute, Tongkoh Village, Berastagi, North Sumatra, from February to June 2020. The research population in this study was the cultivar Doulu generation of MV₃, which had cloves weigh over 1.5 grams. This research used 231 garlic plants. Bulbs planting was carried out at the Vegetable Crops Research Institute, Tongkoh Village, Berastagi, North Sumatra in (February 2020). The design used was a nested design with ear to row planting technique. The parameters observed were growth age, height of plant, number of leaves, tuber diameter, tuber's weight, number of cloves, clove's diameter, weight of cloves, leaf orientation, leaf color, structure of the bulb, color of cloves, and bulb's shapes. The phenotypic of garlic cultivar Doulu Generation of MV₃ is low on leaf orientation, the color of the leaf is Green, the color of the cloves are white with purplish color at the base of the clove, has bulbil on the stem. Plant height is 60-70 cm, number of leaves 7-8, stem diameter 0.8 cm, the structure of bulb are Regular two-fan groups, Regular multi-cloved, Regular quadruple, Irregular, Regular two-cloved, Irregular. The shape of the bulb are Flat Globe, Broad oval, Rhomboid, Broad Elliptic, and Globe. The bulb weight ranges from 12-16 grams with a diameter of 30-33 mm and the weight of the cloves ranges from 1.2-1.7 grams with a diameter of 10-13 mm.

Keywords: Phenotypic, Cultivar, Genotype

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