ABSTRAK

EVALUASI PENAMPILAN KARAKTER DAUN, BUNGA, DAN BUAH CABAI MERAH (*Capsicum annuum* L.) GENERASI M_6 HASIL IRADIASI SINAR GAMMA 400 Gy

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Cabai merah (*Capsicum annuum* L.) merupakan salah satu komoditas hortikultura yang bermanfaat sebagai bumbu masak, bahan baku industri makanan, farmasi, dan kosmetik sehingga memiliki nilai ekonomi yang tinggi. Namun, produksi cabai merah mengalami penurunan akibat penggunaan benih yang kurang unggul. Salah satu upaya yang dapat dilakukan adalah merakit varietas unggul dengan induksi mutasi. Penelitian ini bertujuan untuk mengetahui genotipe harapan pada beberapa genotipe cabai merah generasi M_6. Penelitian ini dilaksanakan di Laboratorium Lapang Terpadu Fakultas Pertanian Universitas Lampung dari Januari-Mei 2023. Perlakuan disusun dalam Rancangan Acak Kelompok (RAK) dengan 5 perlakuan dan 3 ulangan. Perlakuan terdiri dari tiga genotipe generasi M_6 yaitu $M_{2\text{-}30\text{-}74\text{-}80\text{-}1}$, $M_{2\text{-}30\text{-}74\text{-}80\text{-}2}$, dan $M_{2\text{-}30\text{-}74\text{-}90\text{-}2}$ hasil mutasi dari varietas Laris serta dua varietas pembanding yaitu varietas Laris (M_0) dan varietas Ferosa (M_n). Data yang diperoleh dilakukan analisis ragam (ANOVA), kemudian diuji lanjut dengan uji BNT 5%, uji keragaman, uji korelasi, dan uji LSI 5% sebagai uji daya hasil berdasarkan perbandingan rata-rata bobot buah total generasi M_6 hasil iradiasi sinar gamma 400 Gy dengan rata-rata bobot buah total M_0+LSI dan M_n+LSI. Hasil penelitian menunjukkan bahwa seluruh genotipe cabai merah generasi M_6 hasil iradiasi sinar gamma 400 Gy merupakan genotipe harapan dengan bobot buah total $M_{2\text{-}30\text{-}74\text{-}80\text{-}1}$ sebesar 4,74 ton/ha, $M_{2\text{-}30\text{-}74\text{-}80\text{-}2}$ sebesar 4,27 ton/ha, dan $M_{2\text{-}30\text{-}74\text{-}90\text{-}2}$ sebesar 3,98 ton/ha, sedangkan bobot buah total pada dua varietas pembanding yaitu varietas Laris (M_0) sebesar 2,04 ton/ha dan varietas Ferosa (M_n) sebesar 2,71 ton/ha.

Kata kunci: Cabai merah, Generasi M_6, Mutasi, Varietas Ferosa, Varietas Laris

ABSTRACT

EVALUATION OF CHARACTER APPEARANCE OF THE LEAF, FLOWER, AND FRUIT OF RED CHILI (*Capsicum annuum* L.) GENERATION M_6 GENERATED BY GAMMA IRRADIATION 400 GY

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Red chili (Capsicum annuum L.) is one of the horticultural commodities that is useful as a seasoning, raw material for the food, pharmaceutical, and cosmetic industries so that it has high economic value. However, red chili production has decreased due to the use of less superior seeds. One of the efforts that can be done is to assemble superior varieties with mutation induction. This study aims to determine the expected genotypes in several M_6 generation red chili genotypes. This research was conducted at the Integrated Field Laboratory of the Faculty of Agriculture University of Lampung, from January to May 2023. The treatments were arranged in a randomized block design (RAK) with 5 treatments and 3 replications. The treatments consisted of three genotypes of the M_6 generation, namely $M_{2\text{-}30\text{-}74\text{-}80\text{-}1}$, $M_{2\text{-}30\text{-}74\text{-}80\text{-}2}$, and $M_{2\text{-}30\text{-}74\text{-}90\text{-}2}$ mutated from Laris variety and two comparison varieties, namely the Laris variety (M_0), and Ferosa variety (M_n). The data obtained were subjected to analysis of variance (ANOVA), then further tested with 5% BNT test, diversity test, correlation test, and 5% LSI test as a yield power test based on the comparison of the average total fruit weight of M_6 generation resulting from 400 Gy gamma irradiation with the average total fruit weight of M_0+LSI and M_n+LSI. The results showed that all genotypes of red chili M_6 generation irradiated with 400 Gy gamma rays were expected genotypes with total fruit weight of $M_{2\text{-}30\text{-}74\text{-}80\text{-}1}$ at 4,74 tons/ha, $M_{2\text{-}30\text{-}74\text{-}80\text{-}2}$ at 4,27 tons/ha, dan $M_{2\text{-}30\text{-}74\text{-}90\text{-}2}$ at 3,98 tons/ha, while the total fruit weight of two comparison varieties, namely Laris variety (M_0) at 2,04 tons/ha, and Ferosa variety (M_n) at 2,71 tons/ha.

Key words: *Red chili, M_6 generation, Mutation, Ferosa Variety, Laris Variety*