

***ANALYSIS OF GENETIC VARIANS OF MELON (*Cucumis melo* L.) BASED ON MORPHOLOGICAL CHARACTERS IN SUBSTRATE HYDROPONIC SYSTEMS***

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***ABSTRACT***

*The high genetic varians in melons indicates a great potential for the development of superior new varieties. This study aims to obtain morphological characteristics, determine the value of genetic varians and heritability, and identify melon genotypes with potential for future breeding programs. The research uses a Completely Randomized Design (CRD) method, consisting of one factor with 3 replications. There are 6 genotypes: DGMD 4-9-21, DGMD 4-9-14, DGMD 4-9-2, DMGC-2-5-16-1-5, DMGD-4-9-3-3-4, GC-2-7, and 4 comparison varieties: Golden Langkawi, Sweet D25, Pearl Lady, and Dalmatian, making a total of 30 experimental units. The data obtained were analyzed using Analysis of Variance (ANOVA) and further tested using the Scott-Knott test. The results showed that for maximum diameter position, the genotypes DMGD 4-9-14, DMGD 4-9-21, DMGD 4-9-3-3-4, GC 2-7, Pearl Lady, Dalmatian, Golden Langkawi, and Sweet D25 had it in the middle. The longitudinal section shape in genotypes DMGD 4-9-2, Dalmatian, and Sweet D25 was oblate. The base color of ripe fruit skin in genotypes DMGC-2-5-16-1-5, Golden Langkawi, DMGD 4-9-21, and DMGD 4-9-3-3-4 was 5 Y 8/12, and the primary flesh color in genotypes DMGD 4-9-2, DMGD 4-9-14, DMGD 4-9-21, and GC 2-7 was 5 YR 7/8. The parameter for harvest age had high heritability and genetic diversity values. Genotypes with high yield potential are DMGD-4-9-3-3-4 and DMGC-2-5-16-1-5.*

***Key words:*** melon, genotype, genetic diversity, heritability