



ORIGINAL ARTICLE

STUDY OF GENETIC PARAMETERS OF MAIZE CULTIVARS (*ZEA MAYS* L.) UNDER DIFFERENT ENVIRONMENTAL CONDITIONS

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Abstract: The study was conducted in two locations, the first in one of the farms located in the Rashidiya area of Mosul. The second location is the Al-Dabbaneh Rescobch Station in Erbil, located in the Al-Kuwer area, for the autumn season 2020-2021. In the study, 10 inserted genotypes obtained from Debbana Company were used with three levels of fertilization (zero, recommendation and the cultivation of agriculture, combination of Al-Dabbaneh Company). The experiment was conducted according to the Randomized Complete Block Design (R.C.B.D) with three replicates. The results showed that the values of genetic, environmental, and phenotypic variance were significant for all traits. As for the variation coefficient, it gave the highest values for the percentage of oil and the lowest value for the rest of the traits. The values of the broad-sense heritability were high for the traits (male flowering, plant height, stem diameter, number of leaves, number of cob, number of grains, weight of 300 grains, oil percentage, protein percentage, grain yield/plant), the average for traits (female flowering, cob length, number of rows), and low for traits (leaf area, ash percentage). As for the expected genetic improvement as a percentage, the results were high for the trait (percentage of oil), and medium for the traits (stem diameter, number of cob, number of grains, protein percentage, grain yield).

Key words: Genetic variances, Genetic and phenotypic variation coefficient, heritability, Maize.

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