Genetic Analysis of Fifth Filial Generation in A Six-Row Barley

Nageeb K. Yousif
Department of Biology
College of Science
Mosul University

ABSTRACT

Six population of fifth filial generation for two crosses in a six-row barley (Jezera-1× Benedict and Baraka × Arivate), each population with five groups and each group with five families in addition to their parents were used to estimate the components of genetic variance, environmental variance, average degree of dominance, broad sense heritability, narrow sense heritability and expected genetic advance from selection for
grain yield and its components. Additive genetic variance values were: (1) significant at 1% level for biological yield, plant height, grain yield and 100 grain weight in the two crosses and for spike length in the first cross. (2) significant at 5% level for spike number and number of grains per spike in the two crosses and for spike length in the second cross. Narrow sense heritability recorded high values for the studied characters which lead to an increase in the values of expected genetic advance, this indicates that selection in the fifth filial generation will be effective to obtain pure lines with superior character in the two crosses.