

MECHANISM OF GENETIC CONTROL OF SOME QUANTITATIVE TRAITS IN FABA BEAN.

M.J.AL-LAYLA*

*Col. of Agric. and Forestry- Univ. of Mosul .

ABSTRACT

The experiment was carried out at the Field of Agric.& Forestry \ Duhok University during two seasons (2011,2012). General and specific combining abilities were evaluated for estimating their effects and reciprocal effect. Gene action a heritability for yield its components within the method of a full – diallel crosses among four varieties of faba bean v1Z: -(1) Spain, (2) Turkish ,(3) Italy and (4) local variety and their F1, hybrids. Using Randomized complete block design with three replication ,according Griffing,(1956)and Hayman,(1954) methods . The results showed that general and specific combining ability was significant for most studied characters. The reciprocal effect was significant for all studied characters . The result also showed that the components of SCA was higher than the GCA variance for all studied character except protein percentage, it can be predicated for non additive gene action for this characters. Broad sense heritability was high for all the characters, while narrow sense heritability was higher for number of branch\plant, number of seed\plant , seeds yield\ plant and protein percentage ,which indicate additive gene action for these characters . Average degree of dominance were higher more than one for all characters except number of branch \plant, number of seeds\pod, this indicated over dominance control for these character.

Key words: General and Specific ability , Heritability ,Faba bean.